DOCUMENT RESUME

ED 224 274 EC 150 663

AUTHOR Epstein, Carol B.
TITLE The Gifted and Talented: Programs that Work.
INSTITUTION National School Public Relations Association, Arlington, Va.
PUB DATE 79
NOTE 103p.; One of a series of "Education USA Special Reports."
AVAILABLE FROM National School Public Relations Association, 1801 N. Moore St., Arlington, VA 22209 ($9.95, Stock No. 411-13351).
PUB TYPE Guides - Non-Classroom Use (055)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Attitude Change; Creativity; Definitions; *Educational Needs; *Educational Trends; Elementary Secondary Education; *Gifted; Government Role; Leadership; Parent Education; Preschool Education; *Program Descriptions; Program Design; *Program Effectiveness; State Programs; Student Characteristics; Talent Identification; Teacher Characteristics

ABSTRACT

The book examines the current status of education for the gifted in the United States and looks at characteristics of good programs. Considered in the first chapter are increasing interest in programs for the gifted and talented, expansion of the definition of "gifted," increased government commitment, and the evolution of programs in Cleveland and New York City. The chapter on the status of gifted education today provides a brief review of recent developments in each state. Discussed in the third chapter are characteristics of the gifted and talented, creativity and other types of giftedness, and a program for gifted students with learning disabilties. Stressed in the chapter on identifying the gifted and talented is the importance of early identification and the use of many identification methods. The fifth chapter examines different learning needs of gifted children, the use of the arts to identify high potential, leadership ability, and characteristics of successful teachers of the gifted. Program design is considered next with sections on options for program structure, requirements of a good program design, and steps in developing a program. The final chapter focuses on educating parents and the public with examples of an outdoor education program, a preschool program for exceptionally precocious children, and the use of mentors to guide the gifted. Lists of appropriate publications and organizations are also provided. (DB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED224274

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

The Gifted and Talented

Programs that Work

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

C. Butterbaugh

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

EDUCATION U.S.A. Special Report

EC150663

Copyright 1979
National School Public Relations Association
1801 N. Moore Street
Arlington, Virginia 22209

Library of Congress Catalog Card No. 79-66664

Stock No. 411-13351. All orders under $12 must be accompanied by payment. All orders over $12 must be accompanied by payment unless submitted on an authorized purchase order from a school district, organization or institution. Billed orders will include shipping and handling charges. Address communications and make checks payable to National School Public Relations Association, 1801 N. Moore Street, Arlington, Virginia 22209.

Table of Contents

Overview 5

Chapter 1. Where Are We Now? 7

Chapter 2. The Status Today 23

Chapter 3. Who Are the Gifted and Talented and What Do They Need? 37

Chapter 4. Identifying the Gifted and Talented 45

Chapter 5. And Then What? 56

Chapter 6. Designing a Program 68

Chapter 7. Educating Parents and the Public 87

Appendix Selected Sources of Information on Programs for the Gifted and Talented 102

Acknowledgement

The Gifted and Talented: Programs That Work was written by Carol B. Epstein of Washington, D.C. It is based primarily on research provided by the Council for Exceptional Children and the Office of Education's Office of the Gifted and Talented, as well as personal interviews with the directors of the many exemplary programs described in the report. The editors wish to thank these organizations and individuals for their enthusiastic cooperation and help.

The Gifted and Talented: Programs That Work is one of a series of *Education USA* Special Reports that present concise and comprehensive information about current trends and issues in education. It was developed and produced by the *Education USA* Special Reports staff: Anne C. Lewis, executive editor; Cynthia Menand and Kim F. Hasten, director of editorial services, and Holly DiVenere, research assistant. Editorial and production services were provided by Sherry Freeland and Mary Ann Johnson; graphics by Brooke Todd and Associates.

Overview

The gifted and talented—sometimes nurtured, sometimes neglected; sometimes honored, sometimes hated; sometimes the focus of concern, often misunderstood—have always been the object of an ambivalence that has produced a pendulum swing of attention to their needs. For a long time, most programs were limited to academic giftedness. The work of researchers in the 1920s helped dispel the notion of the brainy kid as a pipsqueak with thick horn-rimmed glasses. Exceptionally bright children, they discovered, are generally healthy, outgoing and popular. But efforts at meeting the needs of even this one segment of the gifted and talented were scattered and uneven, and they went through a noticeable decline after World War II. The fires were lit again by Sputnik and the space race in the late 1950s, only to be quenched by the surge of concern for the disadvantaged and the low achiever in the 1960s.

In the 1970s, however, the gifted and talented got a shaky new start. Federal and state governments began to recognize the need not only for educational programs directed at this group but also for governmental support and guidance. Perhaps more than anything, the gifted and talented population needs the stability of such support to ensure that programs will not live or die at the whims of communities with new educational bandwagons to ride or tight educational dollars to preserve.

The definition of gifted and talented has now burst out of its academic confines to include not only the very bright or those with a specific academic aptitude, but also those with exceptional abilities in creative or productive thinking, with marked leadership ability, with talent in the visual or performing arts, and with outstanding psychomotor abilities. It includes, also, those with the potential to achieve in one or more of these areas as well as those with demonstrated achievement.

Diversity – No Easy Answers

Who are these gifted and talented children? Lists of characteristic traits are endless, but not all gifted and talented children possess all the traits. Like all other children, each is an individual. Some are a teacher's dream, others—often out of the frustration of having their needs ignored—a teacher's nightmare.

They come in all sizes, shapes, colors and cultural backgrounds. Some are rich, some poor, some handicapped, and some not achieving anywhere near their potential. Some display their gifts clearly on any of a multitude of standardized tests; others do not. Educators now use a variety of tests and testing procedures along with many other indicators—including observations of teachers, parents, and other children—to identify the gifted and talented.

Their needs are not the same as those of "regular" or "average" children—only more, faster and harder. They need programs that are different, that take into account their learning patterns and their interests and that nurture their gifts and talents.

They need teachers with special traits and skills. Not every teacher can teach the gifted and talented successfully, but many can. Again, the list of traits is endless. Even teachers with all or most of the traits, however, should have special training in meeting the needs of the gifted and talented.

Acceptance by school staff and the community is essential to the success of a program. Inevitably, charges of "elitism" and criticism of spending scarce dollars on children "who could make it on their own" arise. "The cream will always rise to the top," claim those who feel the programs are unnecessary. Gifted and talented children are not like dairy products. Many get curdled along the way, and others are lost in the homogenization of standard school procedures. Equality of educational opportunity does not mean the same services for each child. It means meeting the individual needs of each child.

Differentiated education for the gifted and talented can take almost an infinite number of forms. Programs are about as varied as are gifted and talented children themselves. Local districts should design them to meet the needs and use the resources of the local community.

This *Education U.S.A.* Special Report describes the state of and commitment to education for the gifted and talented today, the special characteristics and needs of such children, and the rationale for special programs. It provides details about some selected programs around the United States to illustrate the many philosophies, structures, target populations and techniques representing the variety of programs for the gifted and talented.

Chapter 1.

Where Are We Now?

Commitment and neglect, interest and apathy, up and down . . . however one describes it, the history of programs for the gifted and talented in the United States presents anything but a picture of stability. Over the last 60 years, the field of special education for the gifted and talented has been marked by research, program development, expanded definition and identification, improvement of differentiated techniques. It has also been marked by fits and starts.

By the end of the 1970s, however, there are reasons for optimism about the prospect of continuity and stability. With care and persistence on the part of its supporters, education for the gifted and talented now has a chance to be something more permanent than a luxury or frill that is discarded when no longer fashionable.

Interest, Programs, Support Grow

First, there has been increasing interest in programs for the gifted and talented in the last few years. In a national survey in 1970, 57.5% of the schools reported having *no* gifted students. Assuming that 3% to 5% of the school-aged population is gifted, the federal government reported in 1972 that only about 4% of the gifted group was in any kind of special program. By 1977, the proportion had increased to 12%, and in 1978 it was 22%.

The old Title III of the Elementary and Secondary Education Act (ESEA) provided funds for innovative and exemplary projects. Out of more than 1,500 projects funded in 1975, only 28 were in the area of gifted and talented education. Title III was replaced by Title IV-C, which provides money to states to stimulate innovative programs in local districts. In 1977, 43 states reported using a total of $5.9 million of IV-C funds for gifted and talented education.

In April 1977, Sen. Jacob Javits (R-N.Y.) hailed "the growing awakening" to the needs of gifted and talented children. And recently,

Joseph Renzulli, director of the Teaching the Talented Program at the U. of Connecticut, called educating gifted and talented students "the hottest act going nationwide. We get three to six requests a day for materials, workshops and just plain calls for help." He cited six states across the nation from which he had received calls during the previous week.

Private foundations have increased their support for gifted and talented education. Professionals working as individuals or in teams at universities and colleges have increased their activity in providing direction for school systems and training for teachers. Such organizations as the National Assn. for Gifted Children, the Assn. of the Gifted, and the American Assn. of the Gifted report local chapters springing up everywhere and membership growing. Parents, who in previous decades would have hesitated to admit to having a gifted child, have increasingly become dedicated and vocal supporters of programs for the gifted and talented. In 1975, the first World Conference on Gifted Children was held in London the second was held in San Francisco in 1977; the third was in Israel in July 1979.

Definition of 'Gifted' Expands

Second, the notion of what constitutes giftedness has broadened considerably. In the 1920s, the gifted were children who scored 130 or higher on the Stanford-Binet IQ test. They tended to be white, middle-class, with college-educated, professional parents. By the 1950s, research was revealing that exceptional *creative* abilities do not show up on standard IQ tests. By the 1960s, it became clear that there were many other gaps in the information obtained from standard IQ tests—giftedness in children who do not speak English and who come from other than the white middle-class culture, talent in the visual and performing arts, nonverbal and nonacademic abilities. The gifts and talents of many children remain hidden either because the child submerges them so as not to appear "different" or because the talents are overshadowed by such other factors as handicapping conditions.

Society views as a gift whatever abilities society deems important. Composing a symphony, sending rockets to the moon, scoring 35 points in a basketball game, achieving resolution among conflicting parties, finding a cure for cancer, writing a great book or a piece of landmark legislation, bringing an audience to tears or laughter—any of these and more may or may not be prized by society in a given period. So, in recent years, educators have developed expanded concepts of giftedness, new ways to identify it, and new techniques to nurture it.

Commitment from Government Increases

Third, there has been a decided increase in commitment to educating the gifted and talented from federal and state governments. In 1972, the Office of Education (OE) established an Office of the Gifted and Talented. In 1974, the Special Projects Act provided separate, categorical funding for gifted and talented education, which has amounted to about $2.5 million each year since 1976.

Federal leadership has been a strong stimulus to the states. In 1971, only 21 states had any kind of legislation dealing with education for the gifted and talented, and in many cases it merely indicated intent. Only 10 states had someone in the department of education working at least half time on gifted and talented education. By 1977, 34 states had legislation for the gifted and talented, and another 10 had administrative policies. At least one full-time consultant was employed by 27 states, and another 14 had at least one half-time person in this area.

Federal and state commitment, in turn, encourages local school districts to develop programs. More important, though, it provides a groundwork of policy and funds that gives stability to the concept of education for the gifted and talented. It gives new reason to hope that the programs will become integral components of the school curriculum, that the current high interest will not once again wane into indifference. But . . .

- Serving even 22% of the gifted and talented means that at least 78% receive no special services. Some educators estimate that only one out of 20 gifted children is ever even identified, let alone served. Knowing there are gifted children in populations where identification is difficult does not mean knowing how to identify them.

- Statistics on numbers of children being served tell nothing about the extent or quality of the service. It may range from one to two hours a week in a pull-out program to a totally separate, full-time class or school for the gifted. It may occur for one or two years during a child's education, or there may be provisions for gifted services from kindergarten through grade 12. It may be enrichment hastily provided by a harassed classroom teacher or a special class taught by a teacher "rotated" into gifted education. Or it may be a program with structure and direction, where supervision and teaching come from specialists in gifted education.

- Federal appropriations of $2.5 million a year amount to $1 per gifted child. Add another $6 million the states choose to use from

Title IV-C, and it is still only about $3 per child. In 1977, only 18 states had an official state plan for gifted and talented education. State funding for the gifted ranged from $20 million in Pennsylvania to nothing in at least 12 states.

The Gifted Emerge

Plans for the gifted started early in the educational history of the United States, mostly in city school systems. St. Louis, for example, had a program of rapid acceleration in 1868, and other cities followed with programs of enrichment, special classes and special promotion.

Not until the intensive research of the 1920s, however, did the gifted child emerge as the kind of person one could like.

Lewis M. Terman's first major effort was to revise the intelligence test developed in France by Alfred Binet in 1904. He began the work at Stanford U. in 1910 and published the first Stanford-Binet IQ test in 1916. "The contrast in intellectual performance between the dullest and the brightest of a given age so intensified my earlier interests in the gifted," he wrote, "that I decided to launch an ambitious study of such children at the earliest opportunity." In 1921 he received a grant for the study and selected from California schools 1,500 children with an average IQ of 150, 80 of whom were 170 or higher. He found them "appreciably superior" in physique, health and social adjustment; "markedly superior" in moral attitudes; and "vastly superior" in their mastery of school subjects. Across the nation in New York, Leta Hollingworth came to similar conclusions at about the same time.

The researchers dispelled the false notions that bright children are weird and generated wide interest in the gifted. Their definition, however, was narrowly limited to IQ scores, which at 130 labeled the child "gifted" and at 140 produced a designation of "genius or near genius." The group consisted of about 1% to 2% of the school population, and the emphasis was strictly IQ and achievement. In the decades that followed, researchers moved from Terman's breakthrough in defining and identifying by IQ tests to understanding the implications of giftedness for education.

Although special classes were formed for the gifted in cities in California, Ohio, New York and Pennsylvania, most communities did not have enough gifted children—by the accepted definition—to warrant such classes. Furthermore, the prevailing opinion was hostile toward creating an elite group by segregating the gifted. While the achievement of many who received no special attention fell off as they grew older, Terman contradicted the "early ripe, early rot" notion by

Only a Toe

The public schools of Shawnee Mission are considered among the best in Kansas. The following exchange took place in 1976 between Charmaine Johnson, Shawnee Mission's only traveling teacher of the gifted, and John Merrow, executive producer of National Public Radio's *Options in Education*, during a five-part radio series on the gifted:

MERROW: How many kids are in the Shawnee Mission school system?

JOHNSON: The last count, I believe, there were 47,500.

MERROW: So if we just said there were 50,000 kids, there would by some mathematical figuring be 1,500 gifted kids, if we say 3 percent?

JOHNSON: Yes.

MERROW: How many gifted kids are identified in the Shawnee Mission public schools?

JOHNSON: There are 38 elementary children now on my itinerant list. We have the diagnostic teams working on identifying children for two more schools, which will bring the total up to probably about 90. And our percentage, from what we can tell on the two schools we're into now with identification, runs much higher than 3. It's been more like 6 or 7 percent.

MERROW: So that if you're reaching 90 at most, 90 out of at least 1,500 if the 3 percent national figure holds up—but in any case, you're identifying a bare fraction of the gifted kids, and you're not providing services for them, unless you're called in to help deal with the problem.

JOHNSON: Yes.

MERROW: Shawnee Mission is just kind of sticking its toe into the water.

JOHNSON: Yes.

following his gifted group in a longitudinal study. The almost total apathy of the early 1940s was shaken with Terman's publication of *The Gifted Child Grows Up* in 1947, in which he showed that his subjects continued to score in the exceptional range of intelligence as adults and that their educational and occupational achievements were remarkable by any measure.

The study prompted the formation of the American Assn. for Gifted Children in 1947, which worked to increase special opportunities for the gifted in schools. Three years later, the association published *The Gifted Child* by Paul A. Witty, proposing a new definition of the gifted child: "any child whose performance in a worthwhile type of human endeavor is consistently or repeatedly remarkable." By the beginning of the 1950s, the cycle of interest and apathy was again on the upswing.

The Cleveland Major Work Program

Being the oldest program for the gifted still in existence is only one noteworthy aspect of the Cleveland Major Work Program. A second is, however, one of the reasons for the first: it has changed with the times.

It started in 1921 with separate classes for elementary grades, eventually expanding into junior and senior high school. Eligibility was based on an IQ score of 125 and above, but with some flexibility. Because teachers, principals and the school district's supervisor of psychological services may recommend pupils, and the program supervisor determines final acceptance, some children with IQs below 125 are accepted and others with IQs above are not.

About 40 years ago, the district's assistant superintendent decided that other children could profit from Major Work activities and lowered the score to 115. Later, children with IQs between 115 and 125 were given an enrichment program, an outgrowth of the Major Work Program. In the early 1960s it was found that the Major Work Program was not completely meeting the needs of children with exceptional potential. Special Major Work classes were formed for fifth and sixth graders who could really take off into advanced work.

But by and large, the program has been one of enrichment and differentiated teaching rather than acceleration, according to Charles Jordan, director of the program from 1966 to 1978. He was preceded by Dorothy Norris, who came in 1924 and for 40 years developed and sustained the program. Starting with the first class at Denison School, she held to an emphasis on open-ended and divergent thinking. "Long before Bloom," says Jordan, "Norris said it's what you think and how you feel about what you read that's important." Acceleration has come

as a result of enriched and differentiated activities. Classes may start algebra in grade 8, so that the students move into calculus before completing grade 12. Literature in grade 5 or 6 may include *Hamlet*, "and if you listen in," says Jordan, "it sounds every bit like a college class studying the same work." From the earliest years, children began learning French in grade 2.

Although the classes started out totally segregated, the children gradually began sharing such activities as recess and clubs with the other children in their school. In the 1950s, the name was changed: grades 2 through 8 retained the name of Major Work, while grades 9 through 11 were called Honors and grade 12, Advanced Placement. For about the last 10 years, the Major Work Program has also provided centers attended by children whose own school has no Major Work class.

From the beginning, says Jordan, "Cleveland was different from Terman," in that Terman found most of his gifted children in suburban homes of professionals. "The gifted have always been found all over the city of Cleveland. Terman didn't look anywhere except in the suburbs." Even as the population of the city changed through the years, the Major Work Program has continued to serve about 4% of Cleveland's school children. In 1977, it served 5,700 out of a total school enrollment of 110,000.

"The alumni of that first class at Denison read like a list of Who's Who," says Jordan. "We've had a continuous history of people saying this program made a difference in their lives."

Because it was always supported by general funds of the school system and was never a line item in the budget, the cost of the Major Work Program cannot be determined. But Jordan says it never came to enormous amounts of money. Extra costs were primarily for French teachers in the elementary grades and for special libraries to supplement regular textbooks, which were not adequate for the children in the program. Subsidies from women's clubs, says Jordan, helped start the program and continued it into the 1930s. "The Major Work Program has a lot going for it," he says. "It focused primarily on the academically and intellectually gifted. They knew where they were going, and the program was well organized, well thought out, and well directed. Over the years, it built up strong support from the community."

But, Times Change

In 1977, Cleveland fell under tremendous financial strains. The city had to borrow from the state to keep its schools going, and the state insisted that the city trim its budget. "They went at it with a meat

cleaver," says Jordan. The Major Work Program was retained, but the director and office were cut. "They said it was so well organized it could run itself."

In place of a single director, curriculum supervisors started providing direction for their various subject areas, while 10% of the time of one supervisor was used to manage the overall program. "But it took all our time and most of our energy," says Jordan, "talking with teachers, parents, children, providing the loving, caring and sharing." Inservice education for teachers—who do not have to be specially certified to teach the gifted in Cleveland—was another victim of the budget cut.

"Someone has to be out in front, sniffing the wind, knowing where things are going," says Jordan. "A lot of things are going on now for the gifted. You have to know whether these things have a chance to succeed. It's the kind of wisdom that comes with being with things for a while."

In 1979 a women's club started a drive for funds to restore the full-time supervisor. Almost 60 years after its inception, Cleveland's Major Work Program still enjoys strong support from the community.

Another Turn of the Cycle

In 1950 the Educational Policies Commission published *Education for the Gifted*. The National Assn. for Gifted Children, an organization for parents and teachers, was formed in 1953; its publication, *The Gifted Child Quarterly*, is a valuable resource for those concerned with problems of the gifted child. In 1954, however, Abraham Tannenbaum, attempting to study programs for the gifted, wrote to 100 schools that had been reported as having enrichment programs in 1941; not one program was still in existence.

Although the 1950s saw the creation of the National Merit Scholarship and the Advanced Placement Program of the College Board, the big surge came in research into new areas of giftedness. J. P. Guilford and E. Paul Torrance were among the many who began delving into divergent and creative thinking—the kind of thought processes that intelligence tests may mask with their standardized demands for one right answer. Guilford's models of the structure of the intellect encouraged educators to look for more than a single measure of intelligence. J. W. Getzels and P. W. Jackson expanded on their work, pointing out that IQ tests do not measure all the functions of intelligence, that creativity is not limited to artistic performance, and that gifted children neither are necessarily prized by parents nor do they necessarily want to be gifted. Calvin W. Taylor went even further by specifying six distinct types of talent and arguing that 90% of all children are above average in at least one of them.

In 1957, education for the gifted and talented received a shot in the arm from the other side of the world. Russia launched Sputnik. The schools were blamed for the fact that the United States was second in the space race, and gifted children—especially in the fields of math and science—were looked on as the nation's prime resource in the unfolding age of technology. Congress passed the National Defense Education Act (NDEA) in 1958 to help find and educate the best scientific minds in the country. Programs sprang up to direct gifted students into intensive technological pursuits. Many of these crash programs had no stable foundation, and many of the students had no real interest in serving society through lifetime work in science and technology.

When priorities shifted to the opposite direction in the 1960s, most of the gains for the gifted and talented were completely wiped out. The war on poverty focused attention on the poor, the underprivileged, the disadvantaged. Educators turned their resources toward minorities, children who could not speak English, the handicapped—groups that had historically been ignored by public education and children who were achieving below average.

The scattered and sporadic attempts at developing programs for the gifted and talented fell not merely to apathy but to outright hostility. People could not reconcile the new watchword, equality of educational opportunity, with "elitist" programs such as acceleration, enrichment and ability grouping that tracked rich white kids into college and poor black ones into nothing. Many of the programs that struggled to remain alive were forced to lower their eligibility requirements to the point where they could no longer be described as programs for the gifted. "Equality" was pitted against "excellence". For a while equality won . . . until the realization came that equality and excellence are not necessarily mutually exclusive.

New York City's Programs

New York City has long been able to boast of some of the most outstanding programs for the gifted and talented. Hunter College High School, for example, has existed since 1869.

Leta Hollingworth started Special Opportunity Classes for elementary pupils in Public School No. 165 in 1922. With partial support from the Carnegie Corp. of New York, she used these experimental classes to study the effects of special classes. After three years, she found that the pupils made no greater gains in achievement than equally bright youngsters who were not in special classes but that they had enjoyed "an enrichment of scholastic experience."

The city began developing its competitive-entrance high schools in the 1930s, which now include the Bronx High School of Science, Stuyvesant High School, Brooklyn Technical High School and the Fiorello LaGuardia High School of Music and the Arts (combining the High School of Music and Art and the School of Performing Arts). Hunter College Elementary School, for gifted children aged 3 to 11, was formed in 1940. That same year, the board of education started a program of elementary classes for Intellectually Gifted Children (IGC), following soon after with Rapid Advance and Special Progress, in which junior high school students with IQs above 130 completed grades 7, 8 and 9 in two years.

Then came the 1960s. Many elementary schools abandoned their IGC classes in response to egalitarian arguments. "It was a question of merely trying to survive in the '60s," says Grace Lacy, recently retired state consultant for the gifted. "The school system was in turmoil, what with teacher strikes and black protests. The teachers union looked upon teaching IGC as a vacation. Teachers were rotated into IGC classes even if they had no training in gifted education. They could ask for it and protest if they didn't get it. While remedial classes were small, the IGCs had 40 children to a class. The middle class—of all colors and cultural backgrounds—became totally dissatisfied with the schools when they saw all the money going for compensatory education."

Changes at the Special Schools

The special high schools were hit with charges of elitism. The board of education established a policy in 1965 that about 14% of the entering class at each school be "disadvantaged" students who score just below the cutoff on the entrance tests. But in 1971, the state legislature passed a law forbidding any change in the use of the tests as the criterion for admission. Brooklyn Tech and Stuyvesant, once all-male, began accepting girls around 1970, after a successful lawsuit by a Brooklyn girl. Hunter College High School admitted its first 22 boys in 1974, following their parents' success in court.

All the schools, although oriented to specific areas of academic or artistic talent, offer broad liberal arts programs. Many students choose the rigorous curricula to get away from the boredom, lack of discipline and declining standards they see in the city's regular high schools. While often subject to jibes and jeers from students at other schools, most students at the special schools say they like best the challenge, the chance to be able to go as far and as fast as they can go, and the broad range of ethnic and socioeconomic backgrounds in the schools.

Although the special high schools now have minority enrollments of between 30% and 40%, their students are consistently high achievers who go to college with an impressive array of scholarships. The disadvantaged students are given special help during the summer before they enter (about 90% enroll), and about two thirds of these make it to graduation. Once in the school, they are on their own.

The academic programs are stimulating and exacting. Bronx Science, for example, requires four years of science that may end in individual research projects of the largest advanced placement biology course in the country. It requires three years of mathematics that might include an intensive advanced course in calculus. Four years of social studies cover Asia; the Middle East; Africa; modern European history; American history, economics and foreign policy; and several unusual electives. Four years of English stress classics and a no-nonsense approach to writing, spelling, grammar and vocabulary. Three years of foreign language end the requirements, to which students may add from numerous electives and a fascinating list of extracurricular activities.

Renewed Interest in Elementary Schools

As New York City's special high schools have been shaking off the criticism of racism and elitism, the elementary schools are experiencing a turnabout as well. In 1973, the Vincent Astor Foundation provided seed money to start special programs for children aged 4 to 7 in nine schools throughout the city. Directed by Virginia Ehrlich, the program consisted of classes of 18 to 20 children with IQs of 140 or above, placed in districts where the superintendents made a formal commitment to continue the program after foundation funding stopped in three years. Parental support was strong. In one district, the parents formed a group that has now become Concerned Citizens of New York City for Gifted Education.

One of the programs started with Astor funds is OPEN GATES in Brooklyn's District 18, where about 15% of the 20,000 children are from Haitian, Puerto Rican or Cuban families. Ten classes in three schools now serve 260 children.

Donald Kaplan, director of OPEN GATES, says the justification is not so much in serving 260 children as in finding teaching techniques that can be used effectively with "average" students as well. OPEN GATES concentrates on devising managerial techniques, such as grouping; on developing curriculum; and on finding ways to deliver it. It focuses on skills of thinking and gathering data, unlocking the doors of books, libraries and computers. "The goal," says Kaplan, "is to have fewer teachers standing in front of classrooms and more of them helping

children learn to teach themselves—to work and to think independently."

Most children are referred to the program at age 4, before they have been observed in a formal classroom. Kaplan tries to reach the "culturally different" population through announcements in Spanish and French newspapers and radio stations and by making the program known to day-care centers and pediatricians in the community. "We have been established long enough so people know about us," he says.

Kaplan relies heavily on referrals from parents. "Parents are fairly accurate about giftedness in their children. Almost always, the child they bring is at least above average, if not highly gifted. They are better judges than we suspected." Parents are asked about developmental milestones—such as when the child started walking, talking or cutting a first tooth—which Kaplan calls culture-free indicators. He also uses standard IQ tests. "I'd be happy to stop using Binet if I could find a better instrument, but the IQ is not as culture-influenced as many people believe." The child's scores are weighted for such factors as low family income, a single-parent home or English not spoken at home. "These children watch television," says Kaplan. "By the time they have been in the country for three months, they know the language."

OPEN GATES has not attracted the lowest socioeconomic levels, however. "We could reach more children if we had free transportation and if we provided more than half days. We compete with day care for working mothers. It's more convenient but less educational."

Classes have about 25 children, one teacher and one paraprofessional. "We also use parent volunteers," says Kaplan, "because these children wear out adults." The teacher presents a theme, which becomes the focus of learning at various centers in the classroom. A theme on seasons, for example, will build on concepts of metamorphosis and life as a continuum. "We don't water down the vocabulary, either." The centers may have baby pictures, leaves in their various annual stages, an aquarium with fish at different points of development. Instructions at each center are in both words and pictures. "We pretend the children can read. About a third can read when they come to us. The rest learn quickly, by the 'look-see' method. Don't waste time on phonics with bright kids—they easily generalize our nonphonetic language." Although the class may have the ubiquitous doll corner, the children use it differently—changing roles, sharing experiences, learning words and concepts. The classes take many trips, which incorporate the theme of the moment. "In a large city," says Kaplan, "the school building isn't always the best place for learning."

One of the problems of using standard materials is that the children's mental development is beyond the development of their small

muscles and their maturity. Four-year-olds cannot write in the small spaces of advanced workbooks. Some 5-year-olds are capable of algebra but cannot work through an adult curriculum. The program needs a great deal of adaptation. One father, a math professor, helped adapt some of the materials. "We use a lot of materials and techniques developed elsewhere," says Kaplan. "There is not much available for early childhood, but there's a good network with much sharing."

The Astor Foundation provided 100% of the funding in 1974-75 and 50% in 1975-76. OPEN GATES received a USOE grant in 1976-77 and 1977-78. The state now provides about $25,000, mostly in Title IV-C funds, and general city school funds add another $25,000 each year. Foundation funds are down to only a little money for teacher training. Teachers meet two hours each week during the year before they enter the program for seminars, class visits and orientation from current teachers. Once in service, they have weekly sessions, as well as one day off each month to visit other programs, resource centers, training institutes and the like. Kaplan looks for teachers who are bright, energetic and experienced in individualization and developing learning skills.

The end of foundation support has meant larger classes and the substitution of a paraprofessional for the second teacher in each classroom. There is no longer a French teacher twice a week. Kaplan says the program does not require much sophisticated equipment. More important are the thought processes used in experiments with such items as magnifying glasses, seeds or magnets. "But these classes eat up paper, trips, materials, phone calls and administrative time. We train the teachers to use parents as administrative assistants."

Parents also attend workshops on dealing with a gifted child. "The program is not good for all children," says Kaplan. "Some are not ready for independent status. Parents can be highly critical of these children. We need to protect the child from the parents. Some parents will exploit the child, whom they see as a passport out of the ghetto. These children have to enjoy learning. Age 5 or 6 is no time for pressure. The teachers give them all the early childhood stuff—hugging, singing, games—and

"With about 50 intellectual factors already known, we may say that there are at least 50 ways of being intelligent. It has been facetiously suggested that there seem to be a great many more ways of being stupid, unfortunately."

J. P. Guilford, 1954

not just five hours of critical thinking. But some of these children just need to be told they are the best."

Partly on the strength of the success of the Astor program and partly because of increasing insistence from parents, New York City began providing its first categorical funding for the gifted in 1977. It appropriated $1.5 million, which was divided among all the city's school districts according to a formula: two thirds on the basis of enrollment and one third based on standardized reading test scores. "It wasn't much," says Grace Lacy. "A low-score school might get $30,000; a high-score school, $60,000."

Lacy says that in the first year the money was largely wasted because the schools were not ready, did not know enough about education for the gifted and had few trained teachers. Many administrators were opposed to special programs for the gifted. One district, for example, used the funds to buy theater tickets.

With grant money from OE, the state began holding dissemination conferences and meetings for parent groups. Lacy says the turnout was tremendous. "The one encouraging factor is that there isn't the same air of hopelessness that existed five years ago." The big needs, she feels, are in teacher training and in strong federal and state commitment. New York State has no legislation on gifted and talented education. "Teachers need to be given time off for training. We need legislation and categorical funding." She sees the parent groups in the state—which now number 31—as the best hope. "But I have seen a beginning."

The Federal Commitment

By the end of the 1960s, it appeared that the gifted and talented had been all but forgotten, left to make it on their own while schools worked to raise the achievement of children who came with disadvantages impeding their learning. The 1970 volume of the *Education Index* contained only half the number of entries under "Gifted Children" found in the 1960 volume.

A few advocates remained, though, and these few fought hard. Their most notable achievement—because of its far-reaching impact—was an amendment to the Education Amendments of 1969, unanimously passed in the House and the Senate. It specifically included the gifted and talented as beneficiaries of federal support under ESEA Title III, Title V (state leadership programs) and teacher fellowships under the Higher Education Act. Even more significant, Sec. 806 directed the commissioner of education to conduct a study of—

- the extent to which special educational assistance programs are necessary to meet the needs of gifted and talented children
- the federal programs being used for the gifted and talented and their effectiveness
- new federal programs needed.

The study was undertaken by Comr. Sidney P. Marland Jr., and completed in 1971. Officially titled *Education of the Gifted and Talented*, it has become known unofficially as the Marland Report. It included review of research, literature and expert knowledge; analysis of data; public hearings in the 10 regions of the Dept. of Health, Education and Welfare (HEW); studies of programs in several states; and review and analysis of OE programs. It found education for the gifted and talented to be, in a word, dismal.

OE responded that, yes, it had placed its priorities on the disadvantaged, vocational education, the handicapped and integration. "But over on the other side of the curve," said the Marland Report, "are other neglected people. . . . Thousands, tragically undiscovered, are in the very populations . . . on whom we are concentrating in other ways. Adequate attention to the gifted and talented is needed to round out our educational program." OE began to correct the imbalance in 1972 by establishing the Office of Gifted and Talented (OGT). While some thought it ironic to place OGT in the Bureau of Education for Handicapped (BEH), it seemed logical to have it in the bureau concerned with special education.

With funds available from various existing authorities, OE provided staff for OGT, supported leadership training institutes for state supervisory personnel, assigned a specialist in gifted education to each HEW regional office, and promoted the use of federal funds for gifted education from several programs. The Special Projects Act of 1974 made separate categorical funds available for gifted and talented education—$2.5 million a year from fiscal 1976 through fiscal 1979. According to Asst. Secy. for Education Mary Berry, that is as much money as all of HEW spends every 20 minutes. In fiscal 1977, OGT received 475 applications for funds and made 57 awards: 31 state education departments, 17 local districts, 4 national leadership training projects and 5 model projects. "We can't begin to reach the 17,000 school districts of the country directly," said Harold Lyon, OGT's first director. "But we can influence the 50 states, and that's where the leverage is."

When the Gifted and Talented program came up for reauthorization

in 1978, the Council for Exceptional Children strongly urged Congress to move it from Special Projects to the Education for the Handicapped Act and change the name of BEH to the Bureau of Education for Exceptional Children. Congress acceded only to moving it to Title IX (Additional Programs) of the Education Amendments of 1978 and making it primarily a state program. States receive 75% of the appropriation (at least $50,000 for each state), of which 90% is to be awarded competitively to local districts. The amendments also authorize direct discretionary grants for training, model projects, research, demonstration programs, state planning and a clearinghouse. OGT remains a part of BEH.

In the summer of 1978, Dorothy Sisk, OGT's second director, said the office was focusing on three areas—gifted among minorities and the disadvantaged, the visual and performing arts, and students with outstanding leadership abilities. "We also need to do more on teacher training," she said. While the Council for Basic Education takes issue with the inclusion of leadership and psychomotor abilities in the federal definition, OGT has established task forces and funded model demonstrations to help direct identification and cultivation of gifts and talents that have received less attention and those within previously overlooked populations. There is a growing feeling that although, in the past, attention was paid to the gifted in times of crisis and the gifted were channeled into programs to meet the crisis, the best way to develop gifts and talents is to identify them and help them grow in the direction best for the individual.

Chapter 2.

The Status Today

The increasing federal commitment to the gifted and talented through the 1970s has had a measurable effect on the states. All of them have personnel who have attended OGT's Leadership Training Institute, designed to develop awareness and advocacy, train state and local leadership and promote planning.

The Marland Report presented the results of a state survey which showed that states were doing little to educate the gifted and talented in 1971 because they lacked funds, were pressured by crisis-oriented priorities and had inadequate personnel. Federal funds, not specifically targeted to gifted education, tended to be diverted to immediate problems.

The Council for Exceptional Children did a survey for OGT in 1977, showing considerable improvement but much yet to be done. Educators of the gifted and talented agree that the minimal requirements for a successful state program are; a) laws and policies backed by adequate funding; b) a full-time state coordinator, and c) a program for teacher training. Eight states still had neither a statute nor administrative policy for the gifted. Use of federal funds for the gifted jumped from $2.1 million in 1975-76 to $3.2 million in 1976-77. Washington, D.C., and 37 states had a definition of gifted and talented in their policies, but only nine corresponded to OE's definition. Only seven states reported no state-sponsored teacher training. Although they vary greatly, 30 state policies suggest procedures for identifying the gifted and talented. Yet only two states identify and serve as gifted 3% or more of their school-aged population, seven provide services to 2%, and 32 are serving only 1.59% of their total school-aged population.

Many state education offices do not have information about activities in local districts. "States don't have money to send people to monitor and assist local districts," says Dorothy Sisk. "People need ongoing support." California, Connecticut, Georgia, Florida, Idaho, Illinois and Ohio are the states with the strongest programs. There were 40 full-time state consultants for the gifted in 1977, compared to 10 in

1972. Nine states (Alabama, California, Georgia, Kansas, Mississippi, New Mexico, North Carolina, North Dakota and West Virginia) require special certification for teaching the gifted.

Between 1977 and 1979, *Education U.S.A.* informally collected information on state efforts for the gifted and talented. The picture that emerges from each state, including five case studies, might be described as improving but uneven:

Arizona. The state legislature passed a law in 1971 defining the gifted child and offering an extra $50 per child per year, up to 3% of enrollment, for school districts to establish special programs. Only four districts applied the first year, but by 1978-79 some 86 districts—out of 280—had programs serving about 10,000 students. The funding has remained level, however, despite massive inflation, and it is estimated that 1,000 to 3,000 more youngsters ought to be served. The criteria are scores at least at the 95th percentile on achievement tests, an IQ of at least 130, and/or evidence of creative and productive performance within the top 3% of district students.

California. "California has been held up as the best state program in the country," says Siegfried Efken, former manager of the Mentally Gifted Minors (MGM) program, "but we have had to battle to hang onto it." Sputnik propelled the state legislature to launch a three-year study in 1957 on whether gifted children need special programs and whether such programs cost additional money. The answer to both was yes. The state passed a law in 1961, specifying the criteria for identification—the top 2% of general mental ability. In 1962, the legislature alloted $40 per child per year for the excess costs of special programs; the amount is now $100. In addition, districts are reimbursed on a one-time basis or $50 for the costs of each child identified as gifted.

Children in grades K-6 must be given an individual IQ test by a school psychologist and score at least 132. For grades 7 to 12 there is an option of an individual or group test, but the student must also score in the 98th percentile in achievement tests in two areas. A case study on each youngster by a committee assesses the child's abilities on the basis of other evidence. In addition, the district has some "wiggle room," Efken says. The committee may admit to the program up to 5% more of its expected 2% gifted population from children who do not quite score 132. The committee may also accept 2% of the children in compensatory programs on the basis of considerations other than standardized tests. The committee must seek potential as well as achievement.

The law is not mandatory. School districts apply for funds by submitting a program plan. Of about 1,100 districts in the state, 339 are

operating an MGM program, "but these account for about 90% of the state's K-12 enrollment," says Efken. The district must provide a minimum of 200 minutes per week of special services, but the options cover separate classes, cluster groupings within a regular class, pull-outs for differentiated activities, adjunct programs that meet before or after school or during the summer, ungraded and continuous progress classes, acceleration, honors programs and seminars and flexible team teaching. The funds are for academic programs only and may not be used to develop talents in art, music or drama. "We encourage districts to get away from the notion of more work or more difficult work and to use an organizing format, usually Bloom's Taxonomy, (See p. 82) to bring the students to higher levels of thinking."

Federal funds pay for a statewide inservice training program. As of Aug. 31, 1979, teachers must be specially certified by a master's degree in teaching the gifted, a specialist credential in gifted education, or certification by the district superintendent. "That last one is a loophole," says Efken, "but it was felt that a permissive program could not demand certification."

"We hope that many states will move in the same direction as California," says Dorothy Sisk. "The districts are accountable to the state. They have a written plan and know where they are going."

Another Shock Wave

In 1978, California was hit by Proposition 13. Nearly all state categorical funding was cut by 10%. Even before that, the $15 million annual appropriation was found to be inadequate. Districts were identifying more children than could be funded at the law's mandate of $100 per child. In 1976, the state attorney general said that unless a district contributed local funds, it could serve only the number covered at $100 per child. "They couldn't increase the money, so they had to decrease the number of students," says Efken. "When we started we had 190,000 eligible students. In 1978-79, we served 162,000. We know we're not serving all who could benefit. Proposition 13 destroyed local funds more than state funds."

While Efken sees a need for increased funds and significant program changes, there is talk of eliminating the MGM program entirely. "First, there is the pervasive idea that the gifted don't need it. We live with this argument and accept it as a given. Second, there is a wave of antagonism against identification by IQ scores. Third, there is criticism that the program is limited to the intellectually and academically gifted but does not address talent or leadership. Others say we should serve only the 20,000 to 30,000 most highly gifted, that we should not look at

potential but only at those achieving now." Efken would like to see the program expanded to include other talents and to identify culturally different children beyond just those in compensatory programs. He would like funds allocated by program rather than by pupil and a requirement for inservice training for administrators and teachers. "If we tried for a mandated program, though, we could sabotage the whole thing. Some districts still say they are meeting the needs of the gifted through their regular program."

Connecticut. Bill Vassar came to Connecticut as a full-time consultant for gifted and talented programs in 1966. The state passed legislation for the gifted in 1967. As in many other states, the gifted programs are under special education, with programs for the handicapped mandated and gifted education permissive.

"We have all the components that can make this state go sky high," says Vassar. Among the strengths of the program, Vassar lists full-time leadership at the state level to provide districts with technical assistance and special legislation with proper funding to reimburse districts for the excess costs. "They could mandate anything, but they have to back it up with money," he says, considering it a plus to be part of special education when it comes to getting funds. A third point is the state's program of professional development. From one course on the gifted in 1966, there are now courses in eight colleges, "and the course at the U. of Connecticut, under Joseph Renzulli, is about the best anywhere." The state also conducts some 30 "update" workshops each year from February to May.

"We have perhaps the broadest definition in the country," says Vassar. It includes "extraordinary learning ability," which covers the top 5% on the basis of standardized measures or "demonstrated or potential academic achievement or intellectual creativity." It also includes a specific definition of "outstanding talent in the creative arts," and the state boasts several regional programs as well as a model project in the arts. "Our definition allows a multiplicity of target groups, but we are not into the soft areas—leadership and psychomotor ability—that are hard to identify." Urban programs are developing new ways of identifying the gifted among culturally different children, and Vassar says Connecticut was first in the country to fund a regional project on identifying the gifted among the handicapped. "Enrollment in the programs does not reflect only the state's 'gold coast'," he says, "but neither does it reflect accurately the minority percentages in the state. We're not sophisticated enough yet at identification, but we're working on it."

Connecticut is serving 8,500 gifted and talented students out of a total public school enrollment of 632,000—just over 1%. There are 141

programs in 111 of the state's 168 districts. State and local funds amount to more than $3.5 million annually, providing an average excess funding of more than $400 per child. State funding is based on program rather than enrollment, and the state must approve each district's program plan. The state will not reimburse for private education (although districts may contract with a university for part of a student's day) or for completely segregated programs.

Diversity describes Connecticut's programming. A six-week summer program in marine studies, jointly funded by the state and the National Science Foundation, sends students to work in the wetlands and Long Island Sound on research ships from Yale and Southern Connecticut State. An old synagogue in New Haven was renovated into an educational center for youngsters talented in the arts. Hartford matches students with local "mentors"—specialists from the ballet, symphony and stage company. A cooperative program between Hamden and New Haven uses an old college campus for an independent study program bringing inner-city and affluent youngsters together. A five-week summer program at Wesleyan U. funded by Title IV-C, is aimed at high school students across the state with creative talent. "Not many states own a mountain," quips Vassar proudly, referring to a Nike launching site turned into the Talcott Mountain Science Center, serving some 60 school districts with such equipment as a solar telescope, radio and television, a computer, a darkroom, a weather station and a seismograph. At Saturday and summer programs on the mountain, youngsters delve into such areas as radio electronics, geology, ecology, meteorology, astrophysics and chronobiology.

Connecticut is beginning to use individualized educational plans (IEPs) for the gifted, "but we are not as advanced in this area as Pennsylvania, North Carolina or Florida," says Vassar. A written plan for each program must stress differentiated learning. Vassar foresees a mandate for IEPs by 1981 and possibly a change in the legislation to make the whole program mandatory.

Unlike many other states, the push for the gifted and talented in Connecticut came largely from educators rather than parents. Parental advocacy grew from the permissive nature of the program; once a few districts started programs, other parents urged their own districts to apply. "Connecticut has been successful because of assistance from its sister states," says Vassar. "Education for the gifted is growing from experience. We're just as happy to help other states."

District of Columbia. Washington, D.C., had an elaborate system of tracking until a court ruled it discriminatory in 1967. There followed a decade of almost complete neglect of the gifted, accompanied by a mass

exodus of the brightest students from the city's public schools. Only a few special programs operated at scattered elementary and secondary schools, although it is estimated that 6,000 to 12,000 of a total of 120,000 public school students could qualify as gifted or talented. The school board gave partial financing in 1977 to a program at George Washington U. for gifted children in grades two through eight from all areas of the city. In 1978-79, the school board used a state grant from OGT and funds from Title IV-C to start a program for early elementary and junior high school students. Beginning with 390 youngsters in 11 projects, it emphasizes imaginative and creative thinking for the academically talented, with hopes of expanding to other areas of giftedness, more students and more grade levels.

Florida. Florida did not legislate for its gifted students until 1975. Like Connecticut, it placed them with all exceptional children, but the gifted in Florida are covered by the same mandate as the handicapped. By the fall of 1978, OE judged Florida first in the nation in terms of number of students served, amount of money spent and number of teachers in the state's gifted program.

Florida's criteria for eligibility are stringent. The program deals only with the intellectually gifted, who must score at least two standard deviations above the mean on an individual IQ test (132 on Binet). Because each school district is required to identify and serve each such child, Florida is serving about 25,000 gifted children out of a total school population of about 1.5 million. State funds amount to about $14 million annually.

Impetus for the program came from hard lobbying by the Florida Assn. for the Gifted, which also sponsors a conference for parents and teachers each summer. The state has several graduate programs in gifted education at its universities and runs at least one inservice meeting each year. In addition, each district has funds for inservice training.

What is best about Florida's program, according to Joyce Runyon, full-time state consultant for the gifted, is the curriculum. "We emphasize what you do after you identify the children," she says. "We help districts develop a curriculum and design activities based on some theory, such as Bloom's Taxonomy or Guilford's model of the structure of the intellect. Too many people are trying to wing it, and they can't justify what they are doing." Florida has also required IEPs for all exceptional children, including the gifted, because before the federal law (PL 94-142) was enacted it required them for the handicapped. They include annual goals and short-term objectives with activities to meet them. "The IEP builds in elevation. You must show exactly what you've done, with documented evidence."

Each district decides on its own program—with state approval—to meet its own needs. They range from Pineview, Sarasota's special elementary school for only the gifted, to full-time classes at regular schools, to centers that may serve children as little as one hour a week. The greatest variety of programs is in Dade County (Miami), which also happens to be the largest school district. Citrus County, on the other hand, is a small but wealthy district with only four schools. They have perhaps the best facilities, equipment and materials in the state program. "The gifted program there has the largest classroom in each school," says Runyon, "and they get great support from the superintendent." Only Duval County (Jacksonville) has a preschool program.

Runyon says the biggest need is identifying the gifted among culturally different children. "Because of the strict criteria, we miss many black, Spanish-speaking, Asian and Indian children. We know we're not serving all the intellectually gifted, let alone broadening the definition to reach other gifts and talents. We're always fighting people who don't believe you have to do something for the gifted because they'll make it anyway. We battle educators who ought to be on our side, parents who ought to understand their children's needs, politicians who have to give us money. But we're working on all of it."

Georgia. Georgia's special education laws and regulations mandate services for the gifted as well as the handicapped. A gifted child must score 1⅓ standard deviations above the mean on an IQ test and be recommended by a committee on the basis of other factors. The state contributes to the cost of teacher salaries and supports the annual Governor's Honors Program for high school students each summer. Georgia has a full-time state consultant for the gifted as well as an adviser to the Honors Program.

Hawaii. Hawaii drafted a state plan for serving the gifted and talented in 1977. It also established a state advisory council and has been supporting pilot projects and inservice education for teachers.

Illinois. Legislation for the gifted was first enacted by Illinois in the 1960s and has long served as a model for other states. The gifted are treated separately from other exceptional children. Illinois' present definition matches the federal definition. The state does not mandate programs for the gifted, but its regulations hold districts responsible for providing "for the unique educational needs of all students." Districts whose plans are approved are reimbursed by the state for the services and materials required for their program. Illinois has two full-time state coordinators.

Indiana. Lacking a specific policy base, Indiana has begun to serve gifted students through programs developed and supported locally. Bloomington, for example, runs an enrichment program for children in grades 2 through 8, using community resource persons as "mentors." Gary has a preschool program; an accelerated program for first-graders; a Saturday school offering courses for the gifted in the performing arts, math, science and creative writing; and a career education program for gifted pupils in grades 5 and 6. Project Triad, at Indiana State U. in Terre Haute, is a junior high school program based on Renzulli's Enrichment Triad Model.

Iowa. "Iowa started from nothing," says Edith Munro, one of two state consultants for the gifted and talented. The principal thrust was attendance by a team from the state education department at two federally sponsored Leadership Training Institutes. The members developed a state plan, complete with time lines and responsibilities. They expanded, revised and polished it before taking it to the state board of education, which adopted it unanimously in 1974.

Programs for the gifted and talented are in the state's curriculum division rather than under special education. "Gifted and talented education should pervade the total program and not be something added on, as it too often is in special education," says Munro. "I work directly with consultants in all curriculum areas. That works for me and for us in Iowa." School districts apply for state funds by submitting program plans.

The state's educational structure is divided into 15 intermediate units. Each has at least one contact or consultant for gifted and talented education. "I spent a long time developing public relations and communication with them," says Munro. "We have a good two-way network." In 1976, the Iowa State Education Assn. produced a film, *Children of Promise*, to acquaint staff and the community with the special needs and problems of the gifted. Iowa Talented and Gifted (ITAG) is a strong advocate group with 26 local chapters. Other associations, from the PTA to AAUW, have been supportive of gifted education. "Now we have to work on administrators," Munro says. "Gifted education is the best-kept secret there is. We need to tell everyone about it."

The definition in Iowa's state plan is similar to the federal definition. About 8,000 to 10,000 children receive special services, but an estimated 30,000 out of a total enrollment of 600,000 could qualify. Identification is on the basis of multiple criteria. IQ is not a factor for selection in cases of talent in the visual or performing arts.

Munro says the most prevalent type of program is the resource

room, where several elementary schools send gifted children to a specially trained teacher who supervises activities geared to each child's identified gift. "Don't lump all the gifted together," advises Munro. It makes no sense to put a mathematically gifted child in a creative writing program." The greatest weakness of this program is that the children sometimes have difficulty returning to their regular classrooms. Teachers who resent having their "best" pupils leave may require that they make up all work. "You must have the backing of administrators," suggests Munro. "The resource room teacher must communicate with the classroom teacher. The child should not feel punished."

Rural districts, with few gifted children and far from resources, have formed consortiums.

Variety in the City

Des Moines has several programs of its own. Since 1973, it has operated what Munro calls one of the finest Executive Internship Programs in the country. It involves excusing mostly high school seniors from regular classes for one semester while each works with an executive in a selected career field four days a week and returns to the group for a seminar on the fifth day. Munro says Des Moines has a similar but more limited program at the junior high school level, called "shadowing." Des Moines started a federally funded project in 1978 for students with outstanding leadership abilities. "It's too new to tell how it's going yet," says Munro. "There are very few tests for identifying this gift." Also in Des Moines is a five-year experimental program "for the child who dares to enter kindergarten already reading well." Consultants in reading and in gifted education have formed a team to help the children and their teachers, which Munro considers an example of the benefits of placing the gifted program in the curriculum division.

Some districts use existing staff to help their gifted children. The guidance counselor, for example, can offer gifted children the chance to get together and talk about such mutual problems as careers, goals and opportunities. Others—particularly those near a university, arts or science center, or commercial laboratory—run mentor programs, matching students with a professional in their field of interest. Some use acceleration, which Munro describes as not merely grade-skipping but an accelerated plan for a child who may be gifted in a particular area—a first grader reading at the fifth-grade level, for example. Clubs meeting before or after school are another means of serving the gifted. Consultants in the arts help districts develop programs for youngsters talented in the arts. "Community theaters and arts councils and centers all have programs for gifted children," says Munro. "School districts need to be informed about what's available."

For the 1979-80 school year, Iowa is supporting 10 pilot projects throughout the state, covering a variety of types of programs and school populations. Each participating district has developed a plan involving staff and community, establishing identification procedures, and describing a program directly related to the identified gifts of the children.

Munro says Iowa's greatest needs are to develop better teacher training by working with the state's higher education institutions, to create a more representative state advisory committee, and to establish a funding plan permanently allocating money to each district on the basis of the number of gifted children. She does not, however, see a retreat from serving gifted children because of bad economic conditions. "We have spent a lot of time building a foundation in Iowa so that gifted and talented education won't fade away as it has so many times in the past."

Kansas. A law passed in 1974 mandated services to all exceptional children, including the gifted, by July 1979. But a strong movement arose in the spring of 1979 to delay the mandate for the gifted until 1981. Federal law requires serving the handicapped but not the gifted, and financial problems in Kansas are getting in the way of serving both. Although the state is providing only about $4 for each gifted child, the mere existence of the law has prompted the development of programs for the gifted in many districts.

Louisiana. Gifted children in Louisiana are served primarily through resource-room programs. There is also a Governor's Program for the Gifted each summer. Started in 1959 as an experiment at McNeese State U. in Lake Charles, it went statewide in 1964 and was taken over by the governor when it experienced financial problems in 1965. The five-year program accepts students at the end of grades 6 and 8 and focuses on higher levels of thinking and exceptional products in a broad range of subjects.

Maine. The state mandates programs for the handicapped but not for the gifted. It reimburses districts for programs for up to 5% of enrollment, but Maine's mostly small and rural districts have difficulty developing programs for small numbers of gifted students.

Maryland. Despite four professional positions for the gifted and talented at the state level, Maryland has no coordinated program. A Maryland team attended a Leadership Training Institute in 1973, developing a state plan that was adopted in 1975. At that time, the state board of education declared that public schools were not meeting the needs of Maryland's gifted and talented students. A statewide summer program, now with four residential centers and several commuter locations for

junior and senior high school students, was expanded to serve about 1,500 youngsters. But a report to the state board in October 1978 described district commitments as inconsistent, characterized by isolated programs meeting the needs of some students at some ages in some areas of giftedness.

Massachusetts. With perhaps the most comprehensive laws and policies in the nation for serving the handicapped, Massachusetts has not kept the same pace for the gifted and talented. In December 1978, the state board of education adopted a position paper encouraging the development of gifted programs.

Michigan. Michigan assessed its needs for education of the gifted and talented in 1973 and adopted a state plan in 1976. The state allocates $200,000 a year for pilot programs in local districts.

Mississippi. "If Mississippi is doing it, certainly a lot of other states can do it, too," says Frances Karns, who teaches gifted education at the U. of Southern Mississippi. A 1974 amendment to the state's special education law included gifted and talented programs on a permissive basis. As of 1978, the state pays 100% of the costs of each specially certified teacher for the gifted but not for supplies and materials used in a program. Its full-time consultant is paid with federal funds, but efforts are being made to have the state assume the costs.

State regulations require that each gifted child receive special services at least five hours per week, with one teacher to every 25 students. "If the state mandated gifted education, I don't see how we could get enough people qualified and certified," says Karns. "We'd need about 900." Two courses, amounting to six hours are required for special certification; in 1981, the requirement will rise to 21 hours. Of 154 districts, about 57 have some program, but very few span grades 1-12 (kindergarten is not compulsory in Mississippi). About 170 certified teachers serve about 4,000 children from a total state enrollment of 500,000. "That's about one sixth of the number we need to serve," says Karns. The minimum requirement is an IQ score of 120.

Most of the programs use resource rooms in the child's own school. The teacher might survey the interests in the class and then supervise small units or independent projects. In a junior high school program in Hattiesburg, some students bring their projects back to their regular classrooms, others to college classes. One girl, says Karns, did a project on C. S. Lewis and J. R. R. Tolkien, which she presented to a college literature class. Two boys worked together to make architectural renderings for renovating an unsightly street. One fifth-grade boy designed a city under the sea.

Karns mentions two programs funded by Title IV-C, one using Renzulli's Triad Model, the other using the community as a base for career education. A program for culturally diverse students focuses on oral and written communication skills, while another for artistically talented culturally diverse youngsters infuses arts into the academic subjects. "The programs are as diverse as they can be," says Karns. "They are based on students' interests and usually involve independent study."

Karns lists several areas in which state efforts need improvement, but she notes that these tend to be universal and not unique to Mississippi. One is to develop better means of identifying the gifted among culturally different students. "We are looking for nonverbal measures," she says. A second is to develop more programs in the visual and performing arts. Third is to deal with the highly gifted, who are scattered through the state. "We need joint district agreements," she says. "Only rarely do we accelerate, and we have no option for early entrance. The parents end up sending the child to private school." Karns cites a need for more model programs in all areas of education for the gifted and talented.

By 1981, all teachers in Mississippi will be required to have taken a course on teaching exceptional children. Karns has integrated methods for the gifted into the regular methods courses at Southern Mississippi. The Center for Gifted Studies there is also providing inservice programs, conferences and seminars for school administrators and parents.

The biggest strength in Mississippi, says Karns, comes from a real commitment to gifted education. "All the mechanisms are there for an outstanding statewide program." Although school districts are feeling the pressure to meet the federal mandate for serving the handicapped, there is strong support for the gifted from parents, teachers and superintendents. "I watched the legislature last year as they increased the funding for special education but heard the pleas for money to comply with the federal law, 94-142. They knew if they scratched the gifted, the top of the capitol was going to come off."

Missouri. A law enacted in 1973 provides state funding for programs serving up to 5% of a district's enrollment. In 1974-75, five districts participated. In 1977-78, 29 districts received state support to serve about 6,000 students, although some 50,000 out of a total state enrollment of nearly 1 million would be eligible. Missouri has a half-time state consultant.

Montana. As of 1979, Montana provided no state support for educating the gifted and talented, although it has allocated funds for

professional time and materials for planning programs. A 1979 legislative proposal would provide matching funds to districts.

New York. The Board of Regents published a position paper in 1976, *Educating the Gifted and Talented in New York State*. Of its 10 recommendations, six were directed to local districts to begin or expand efforts at meeting the needs of gifted and talented students. But although the state has passed along federal funds to the districts, it has provided negligible financial support of its own for any aspect of education for the gifted and talented and as yet has no state plan. Scattered programs exist around the state, with the greatest thrust coming from the cooperative boards (BOCES).

North Carolina. The state's special education law mandates services for the gifted, as well as the handicapped, and provides a lump-sum payment to each district based on enrollment. Districts apportion the money among all children with special needs at their own discretion. The state employs three full-time professionals in gifted education. The Governor's School of North Carolina, begun in 1963, is a residential program for high school students, focusing on academics and the arts. And the state now has plans to open a high school for superior math and science students.

Ohio. Ohio first allocated money specifically for the gifted in 1975—$100,000 to 13 districts meeting standards adopted by the state board of education. In 1976, the state established the Martin W. Essex School for the Gifted, a week-long summer program at Ohio State U. for 50 high school juniors. The state has a full-time coordinator for the gifted and talented.

Oklahoma. Education for the gifted and talented in Oklahoma took a giant step forward after the state began allocating funds in 1976. About 140 children were served by special programs in 1975-76; more than 2,000 were served the following year. In 1977, Oklahoma established a summer arts institute, bringing in professionals in many areas to work with highly talented high school students.

South Carolina. The state began funding pilot programs in local districts in 1974 through competitive grants. Interest in educating the gifted and talented has been increasing among the districts in subsequent years.

Tennessee. The special education law mandates services to the

gifted, but funding for the gifted is not separated from the handicapped. In a 1977 survey of Tennessee's 148 school districts, 104 reported no verified gifted students, and most of the rest believe they are serving the gifted through regular programs. About 8,000 children, out of a total state enrollment of more than 800,000, were in special gifted programs in 1978-79.

Texas. Education of gifted and talented students was the 10th of ten statewide priorities adopted by the Texas state board of education in November 1974. In 1975, the legislature mandated special programs for the gifted and talented, and the board adopted a state plan offering technical assistance to 500 of the state's 1,136 districts to make special programs an integral part of their curriculum by 1978. At that time, 223 districts had already developed local programs. The board passed a permissive policy in May 1976, defining gifted and talented students and describing special services that might be offered. Planning and training sessions for the state's 20 regional education centers were held in the fall of 1976, and many new programs began in 1977 and 1978. Funds for these efforts, however, came almost entirely from federal sources.

Virginia. Virginia law mandates programs for the gifted and talented, and the state has been reimbursing districts about $1.4 million a year for such programs. The state created the Governor's School in 1973, a summer program for students in grades 11 and 12 who are gifted or talented in the fine arts, humanities, natural and physical sciences, and/or history and the social sciences.

Wyoming. A state team attended a Leadership Training Institute in 1974, and the state superintendent appointed a half-time consultant. A state plan was adopted in 1975. Federal funds supported the first two projects, in 1975, and four more in 1976. A state advisory council was established in 1978 to help update and improve the state plan.

The federal effort has made a tremendous impact on the states. Statewide laws, policies and funds are now changing the picture of education for the gifted and talented throughout the nation. At the beginning of the 1970s, what programs existed were initiated, implemented and financed locally—dependent on local priorities, resources and advocacy. By the end of the decade the trend had sharply turned toward coordination, cooperation, and . . . perhaps . . . stability.

Chapter 3.

Who Are the Gifted and Talented and What Do They Need?

Most educators today agree with the general definition of the gifted and talented that began to emerge in the 1950s. Abraham Tannenbaum, education professor at Columbia U., says gifted and talented children are "outstanding consumers and producers of knowledge and ideas in any worthwhile endeavor, whether in math, engineering, music or social leadership." The Council for Exceptional Children (CEC) says they are "those children and youth whose abilities, talents and potential for accomplishment are so outstanding they require special provisions to meet their educational needs. These are persons of exceptional promise whose capabilities predict contributions of lasting merit in widely varying fields."

They may have demonstrated their achievement, or they may have deeply hidden potential. They may have one exceptional gift or talent, or they may excel in a broad range of areas. Not all students who get high grades in school are gifted, and not all gifted youngsters get high grades. There are different kinds and different degrees of giftedness. There is as much difference between IQ 130 and IQ 160 as between IQ 130 and IQ 100, just as there is a difference between musical talent and musical genius. Perhaps the one blanket statement that can be made about gifted and talented youngsters is that each is unique. They appear to differ more from one another than do persons in the average range of abilities.

Characteristics of the Gifted and Talented

Though unique, gifted children tend to have certain characteristics in common. Rarely, however, does any one gifted child exhibit all the

characteristics, and some may have traits diametrically opposite from characteristics supposedly common to gifted children.

Intellectually or academically gifted children have been characterized as having good memories, long attention spans, diverse interests and large vocabularies. They tend to be observant, curious and questioning, as well as independent and resourceful in their thinking and working. They easily analyze and synthesize concepts to find new relationships among ideas. They may be logical, rational and practical, as well as nonconforming and impulsive. Empathy, sensitivity and perceptiveness usually characterize their social interactions. They may have a high degree of energy—both mental and physical—that sometimes leads them to be falsely diagnosed as hyperactive.

Academically gifted children learn quickly. Where the average child may need to go through several steps in order to absorb a concept, the gifted child's mind appears to make huge leaps over many of those intermediate steps. Gifted children may set high standards of perfection for themselves, ignoring external praise when they know they can do better. Only the most extraordinarily bright children seem to have adjustment problems, perhaps because gifted children are smart enough to adapt to different situations and because they often have a keen sense of humor.

Before school age, gifted children may walk and talk early, have many interests and be insatiably curious. They may learn to read spontaneously and show remarkable ability to communicate their knowledge and to solve problems. They are likely to have amazing memories and unusual concentration, sitting for long periods at a single project. They tend to tell time and deal with money earlier than other children. They may show unusual facility working with jigsaw puzzles, blocks, clay or crayons.

As much as literature abounds with descriptions of gifted children at preschool and elementary school levels, it lacks such descriptions of secondary school students. By the time students reach secondary school—and often well before—the way they do or do not manifest their gifts and talents appears to depend greatly on their previous experiences.

Thus there arises the phenomenon of **the gifted underachiever**—the child whose gifts have not been nurtured or have caused negative experiences. This is the child who may exhibit traits that seem to be the very opposite of giftedness. So we have the astounding revelations about Albert Einstein, who did not talk until he was 4 and failed math in high school; Thomas Edison, who was told he would never amount to anything; Winston Churchill, who did poorly in school; Eleanor Roosevelt, who was a withdrawn child. Experts agree that early identification of gifted children could help solve some problems, but

children who hide their giftedness are all the more difficult to identify.

Some gifted underachievers find they are best accepted by parents, teachers and peers when they do well, but not too well. A fourth grader doing math at the fifth-grade level, for example, may not appear to be a problem. If the child has the potential to do math at the eighth-grade level, however, how many teachers have the time or insight to spot the latent gift and unmet needs?

A number of studies, especially those by E. Paul Torrance, suggest that gifted children may have difficulty reconciling the tensions within themselves with the expectations of those around them. Some are bewildered by the simplicity of their school work and keep looking for complicated issues. As they go through school, they tend to become apathetic or even hostile toward school work, uninvolved in social or academic activities, and unmotivated. They often develop low self-esteem and low self-expectations. They may daydream, make trouble, ask impertinent questions. The older they get, the less able they are to adapt. Joanne Whitmore, a professor at Peabody College for Teachers (now part of Vanderbilt U.), who has done extensive work with gifted underachievers, says she has found that in the early grades gifted girls with unsatisfactory school experiences are likely to become resigned or detached while boys tend to exhibit aggressiveness. Recent studies, she says, estimate that as many as 70% of America's gifted children are underachieving to a significant degree.

The traits exhibited by gifted underachievers often cause them to be labeled behavior problems, learning disabled or mentally handicapped. What's more, the further children are from the white, middle-class culture, the less likely they are to experience approval of their academic giftedness and the more likely they are to hide it.

Coping with Creativity

Children gifted with creativity also exhibit traits different and even opposite from those of children whose gift is strictly high intelligence. The highly intelligent but non-creative person tends to be a conformist, to do what is expected, to seek approval from others. These persons are the ones who adjust best and are socially popular. They give conventional responses, seek conventional careers, have conventional interests. Inevitably, teachers like them best.

The highly creative person is usually the nonconformist, the independent thinker, less concerned with authority or with order and organization, and more temperamental. Such persons tend to become more emotionally involved and committed, and tend to be aware of and open

to their own feelings. They may have wild or unusual ideas and a sharp sense of humor. They may be playful and imaginative, give unexpected responses, have a rich fantasy life, and be perceptive and intuitive. They usually thrive on complexities and open-ended problems. They tend to be self-confident, flexible and willing to take risks. They may seek unconventional careers, have unconventional interests, and care little about social restraints or the opinions of others. Both literally and figuratively, the highly intelligent person may be afraid of the dark because of the unknowns lurking there, while the highly creative person relishes it for the very same reason.

Torrance defines creativity as "the process of sensing problems or gaps in information, forming ideas or hypotheses, testing and modifying these hypotheses, and communicating the results." Creative thinkers are characterized by **fluency,** the ability to produce large quantities of ideas; **flexibility,** the ability to use many approaches; **originality,** the ability to produce something new and to see new relationships; and **elaboration,** the ability to fill in the details, to embellish a basic idea with further steps and responses. They are **divergent** thinkers, while noncreative but highly intelligent persons are **convergent** thinkers, seeking the "right" answer.

Torrance notes that creative imagination reaches a peak around age 4 and tends to drop after a child enters school. There is a sharp drop at grade four, but some growth during secondary school. Recent studies suggest that the drops are more cultural than natural. Highly intelligent persons may find a need to suppress their creativity in order to gain approval from a conventional society, sometimes with resulting personality disturbances. "Inescapably," Torrance writes, "the individual who thinks of a new idea is in the very beginning a minority of one. . . . There are very few people who can tolerate being a minority of one." While research in the early 1960s tended to show a clear distinction between intelligence and creativity, later studies found definite relationships. Many experts suggest that in order to achieve something, the highly creative person must have at least above-average intelligence, and the highly intelligent person must have a fair degree of creativity. Joseph Renzulli's Enrichment Triad, for example, is based on his theory of giftedness as composed of above-average ability, task commitment and creativity.

The Myriad of Gifts

Persons with **talent in the visual or performing arts** also have unique characteristics. They may or may not have unusually high intelligence. They may, however, be considered one group among the

highly creative, with traits similar to creative scientists, architects and inventors.

Leadership has only recently been recognized as an identifiable gift. Children gifted in leadership are liked by others and able to influence others. They are the ones who take charge, delegate responsibilities, find ways of accomplishing things, get elected to office. Others come to them for ideas and decisions.

Psychomotor ability refers, of course, to athletically gifted youngsters, to whom schools have been identifying and giving special attention for years. They are energetic, well coordinated and enjoy participating in competitive games and outdoor activities. They are willing to spend time perfecting specific techniques, and their performance is outstanding. It also refers to students with mechanical and manual dexterity—the sort of gift equally essential to a surgeon or a diamond cutter. These youngsters can construct, fix and manipulate objects easily, and excel in crafts. They are interested in gadgets and devices and in science, technology and mechanics.

Culturally different children may be gifted, too. Giftedness itself is a difference from the norm, even in the white middle-class culture. Most gifted children find outlets for their gifts that return some measure of personal reward and social approval. The same is true for the culturally different, except their cultures may reward and approve different outlets. Music, art, dance, humor, obedience, physical prowess and dexterity, attention to small details, sensitivity and coolness are examples of traits and abilities that may be prized or rejected by any given culture.

Disadvantaged gifted children are likely to be strongest in adaptability. Nathan Caplan's 1973 study of ghetto youths who were difficult to employ showed they were highly motivated and skilled in areas that ensured their social sufficiency and survival in the ghetto. Unfortunately, these skills—hustling, body language, gang leadership, conniving, fighting, athletics—also ensured their failure at regular jobs. Torrance developed a list of characteristics he found in gifted disadvantaged youngsters—including rich and expressive informal speech, ability in music and movement, leadership in small groups, humor and originality—which he calls "creative positives."

Researcher Frank Reissman pointed out that gifted disadvantaged youngsters may appear to be slow learners when they are really cautious or when they are "physical" learners. They may appear to lack verbal ability when in fact their language is simply not the school's language. In the language of their homes and streets they may be highly fluent and articulate. They may enjoy learning but hate school and they may show a high degree of cooperation but shun competition.

Handicapped children may also be gifted with the potential to make remarkable contributions. Helen Keller was blind and deaf; Leonardo da Vinci and Michelangelo were learning disabled; Thomas Edison was deaf and dyslexic; Franklin D. Roosevelt was orthopedically handicapped; singer-musicians Ray Charles and Stevie Wonder are blind.

According to CEC, "an educated guess can be made that there may be close to 300,000 school-age children in the United States who are both gifted and talented *and* handicapped in some way. Because of its high visibility, it is often the handicapping condition of these children which receives special attention while their intellectual and creative development is overlooked." Teachers, along with everyone else, tend to see the handicaps but not the gifts, often lowering their expectations for the child and causing the child to develop a negative or unrealistic self-concept.

C. June Maker, a specialist in teaching gifted handicapped children, suggests that when Lewis Terman destroyed the stereotype of the gifted child as a "runty misfit," he created a new one of an attractive, healthy, well-adjusted child. "Actually," she writes, "both of these extreme descriptions of the gifted are inadequate in failing to recognize the gifted as individuals." When children classified as emotionally disturbed or learning disabled were tested recently in Pennsylvania, more than half qualified for entrance into gifted programs.

Dorothy Sisk notes that some children may become labeled handicapped **because** of their gifts—the extreme case of the gifted underachiever. "Teachers try to teach, but these children want to go off on their own tangents," she says. "Both the child and the teacher are fighting to be in charge of the learning process. The teacher doesn't appreciate the basic giftedness of the child, considers it deviant, wants it stopped, and refers the child out of a program as emotionally disturbed. Are they emotionally disturbed when they come to school, or do schools and parents create the condition?"

A Program for Gifted Students with Learning Disabilities

"I don't believe any youngster deliberately does poorly in school from the beginning, in kindergarten or first grade," says Lucille Peterson, supervisor of the gifted program in Pinellas County, Fla. "Somewhere in grade two or three, disillusionment sets in. Potential is so fragile. One must be careful in nurturing it."

Pinellas County started a special program for learning disabled

(LD) gifted children in 1977. "We noticed many children identified as gifted who were doing terribly in the classroom," says Peterson. "Teachers wouldn't let them out for gifted programs five hours a week. Then we discovered that one or two were being served for learning disabilities. We believed we could find enough to justify a class. These children were being driven up the wall by the regular classroom teacher."

The county applied for a grant from the Office of Education (OE), which provided materials, equipment and a secretary-aide in 1977-78. The self-contained class of about 15 children in grades two to five is taught by two specialists, one in learning disabilities and one in gifted education, both paid by the district.

"We use no special identification procedures beyond those required by the state," says Peterson. The children must meet requirements both for gifted and for LD programs. "I'm sure we miss many, especially those who are performing on grade level but potentially could be working above. Our goal is to catch them early before they're completely frustrated."

The LD specialist provides step-by-step remediation in each child's area(s) of greatest need, while the gifted specialist provides enrichment and differentiated activities in each child's area of strength. The latter may include working with other than prescribed textbooks, doing individual projects, and learning research skills. The emphasis is on open-ended inquiry, less convergent and more divergent thinking. The two teachers develop an individual education plan for each child. "The class includes four grades, but they work at 15 levels," Peterson says. "Each child gets completely individualized attention."

She notes that many LD gifted children have other emotional and physical problems. "They may be hyperactive or prone to allergies. Most gifted children need freedom, but LDs don't have the same inner motivation. They need a combination of structure in their weaknesses and freedom in their strengths."

The obvious initial results in the Pinellas program were significant increases in the children's achievement scores. While parents offered little support during the program's developmental stages, they quickly became enthusiastic when they saw their children's rapid advancement. "We didn't dare end it when the federal funding stopped," says Peterson. "These parents were being ignored. They knew their children had been identified as gifted but were not performing up to expectations. They were frustrated and distrustful of the school system." The teachers meet with the parents individually and provide speakers on the children's special problems for group meetings. Peterson has been concerned about what happens when the children leave the program and

enter a departmentalized middle school so the program also tries to mainstream fifth-graders into regular classes.

Like Donald Kaplan with the OPEN GATES program in Brooklyn, Peterson sees an even more important result in the program's effects on all education in the district. "The teachers are beginning to recognize that a child with potential does not necessarily perform up to it. The school system is recognizing that treating all children equally may not give them the best education possible. Many, for example, don't do well in an open classroom. We're not just treating 15 children. We're giving the school system a new approach," she says.

Chapter 4.

Identifying the Gifted and Talented

Given that gifted and talented children may vary more among themselves in their behavior and responses than does the whole group of "average" children, and given that many gifted children hide their talents, it is little wonder there is no set of measurements totally accepted for identifying all gifted and talented children. There are perhaps only two generally accepted statements about identification: **start early, and use many methods.**

Research has emphasized the importance of identifying gifts and talents early in a child's life by showing that considerable potential may be lost as the child gets older. Early identification is most productive for intellectual and academic giftedness; it may not be possible to nurture other gifts until a child matures physically and/or emotionally. Most experts suggest that identification should begin in kindergarten or first grade, and some claim it should start at the preschool level. Such early identification not only improves the chances of the child's needs being met before frustration and boredom set in, but also enhances parental involvement at a time in the child's life when parents can make a real difference. Some experts warn that signs of giftedness may not translate into outstanding academic achievement at the preschool level. A. Harry Passow suggests being aware of "morning glories" (persons whose giftedness is apparent early but soon wanes) and "late bloomers." Others point out that the needs of intellectually gifted children exist through all of school and identification, therefore, should continue throughout the grades.

Use of multiple methods of identification is a logical outgrowth of the recognition that there are many gifts and many dimensions to each gift. Gifted education specialists recommended using as many of the following identification methods as possible:

Teacher nominations. Because teachers on their own tend to identify fewer than half the gifted students, Renzulli and others have developed "Scales for Rating the Behavioral Characteristics

of Superior Students" as an aid in guiding teacher judgment.

- **Tests.** Group tests may be used as an initial screening to select children to take individual tests, which are more expensive to administer but also more reliable. The best of the individual IQ tests, experts say, are Stanford-Binet and the Wechsler Intelligence Scale for Children—Revised (WISC-R). There are IQ tests that measure several different kinds of intellectual abilities—primary mental abilities, differential aptitude tests, multiple aptitude tests. A number of nonverbal and "culture-free" IQ tests have been developed recently. Then there are achievement tests, such as the Iowa Tests of Basic Skills. For creativity, the Torrance Tests of Creative Thinking are the most widely used.
- **Parent nominations** tend to be fairly reliable, especially in the child's early years.
- **Self nominations** are based on the child's autobiographical data or interest inventories.
- **Peer nominations** are based on charts that indicate preferences on friendships (sociograms).
- **Auditions** are used for psychomotor and performing arts abilities, and **examinations** of portfolios will show the student's original work in the visual and communication arts.
- **Evaluation** of data from all sources, based on flexibility about cut-off points, is the overriding method.

Should one select the methods most appropriate to the kind of program for which students are being identified? Perhaps, but it is also logical to determine which gifts and talents exist in the group and then design programs based on meeting the needs, interests and learning styles of those particular children. One of the best sources of advice on devising identification procedures is the state consultant for the gifted and talented.

Procedures for identifying intellectual and academic giftedness have been longest in development; they are, therefore, abundant and varied. Although IQ tests have recently been attacked as biased in favor of the white, middle class, educators tend to agree they are reliable predictors of academic success but should not be the sole measurement. Even for initial screening purposes, they have been found most effective when used together with group achievement tests.

Joyce Runyon, Florida state consultant on the gifted, recommends the following sequence for identifying academically gifted youngsters:

1. Nominations—from guidance counselors, specialists, community professionals, classroom teachers, principals, administrators, parents and self.
2. Screening—based on weighted checklists.

3. Descriptive case study
   a. academic history
   b. testing—cognitive: convergent thinking by achievement and IQ tests, divergent thinking by creativity and intellectual maturity tests; affective: convergent and divergent
   c. interests, observations, social-emotional adjustment appraisals
   d. personality assessment—interviews
4. Placement—based on evaluation of data by a committee of teachers, psychologists, administrators

Measurements of creative thinking are also comparatively well-developed. In most cases, identification of intellectual ability includes testing for creative-thinking abilities. The theory is they are actually two sides of the same gift; the IQ being a measurement of convergent thinking and creativity being a measurement of divergent thinking.

Researcher J. P. Guilford sorted out the activities that go on in the process of thinking and came up with comprehension, memory, convergent production, divergent production and evaluation. From there he identified at least 50 factors involved in intellectual activity. Researcher Paul Torrance named four factors characterizing creative thinking—fluency, flexibility, originality and elaboration. Both argued that an individual might be strong in one or more factors and weak in any number of others and therefore, a single IQ score would fail to identify the strengths of many creatively gifted persons. Gifted underachievers can more easily "psych-out" an IQ test—and do just acceptably well-enough—than they can a creativity test.

The Torrance Tests of Creative Thinking attempt to trigger several creative factors at once, while Guilford's Creativity Tests for Children attempt to measure the specific components of creative thinking separately. There are also several instruments for studying creative personalities, from Rorschach's Ink Blots to several personality inventories.

Less well-developed are instruments for assessing creative achievement. Many researchers and educators have found a correlation between intellectual giftedness and talent in the visual and/or performing arts, although they are quick to point out that superior artistic abilities do not require unusual intellect, and intellectual giftedness may be accompanied by only aesthetic appreciation of or interest in the arts. Most schools rely on the judgment of experts, peers and parents for discovering talent in the visual and performing arts. Nominations by classmates, classroom teachers and parents provide the initial screening for assessments by arts specialists in the school system and professionals from the community.

When Measurement Gets Tough

Measurements for the "soft" areas—leadership and psychomotor ability—are relatively scarce, usually limited strictly to observation. Tannenbaum finds that while success in school is a good indicator of success in professional life, it bears little relation to successful leadership. Both adults and peers are usually able to spot the leaders, but adults must remember that children sometimes lead in socially unacceptable ways. They may be leaders of street gangs or scout troops; they may be elected to school offices or lead others into trouble. But they are the ones other youngsters look to when a problem needs solving or something needs to be done.

Similarly, psychomotor ability can be detected by experts and by children. Coaches, recreation leaders and dance teachers might make nominations, as might teachers who notice a child's manual dexterity in the classroom. Children know whom to choose for sports teams and whom to ask to fix or construct something.

Educators are now paying increasing attention to identifying the gifted and talented among minorities and disadvantaged groups. Culture-free tests are only a partial solution, because they still seek characteristics considered worthy by the dominant culture. An environment lacking intellectual stimulation, adult role models and other youngsters with whom a gifted child might share ideas is not likely to produce a child with the characteristics of the dominant culture.

Torrance suggests looking for superiority in the characteristics of the particular culture. Others hold that identification should be done by an expert who is a member of, or at least highly sensitive to, the culture of the child. Compensation must be made for a child's difficulty with language and for any history of physical or psychological neglect. Special attention should be paid to such gifts and talents as psychomotor ability, creativity, leadership and talent in the visual and performing arts, which seem to be less hindered by conditions of disadvantage. Above all, experts agree, the nets should be thrown wide, the definition broad, and the standards as flexible as possible when attempting to identify gifts and talents among the culturally different.

Identifying the Spanish-Speaking Gifted in Philadelphia

Philadelphia has a highly developed program for the gifted and talented. Started in 1973-74, it includes 97 special teachers, comprehensive teacher training, individual education plans (IEPs) mandated by the

state for all gifted children and services at all levels. Elementary school children attend resource rooms at least one day a week, where activities are geared to each child's needs rather than to a specific curriculum. Junior high school students attend one of three centers staffed by teams of four or five teachers, each an expert in such areas as computers, fine arts, performing arts, social sciences or communication skills. The senior high school program includes working with mentors, individualized program development with student and parents, career exploration and apprenticeships, advanced placement courses, aptitude testing and other components.

"By the second year of the program, we had identified only 11 Hispanic children as gifted and talented," says Leonora Cohen, elementary coordinator of the program. "We should have had 200 to 300, if 3% are gifted." She received federal and state grants to find a solution.

The project to find gifted Hispanic youngsters started in 1976-77 with the goal of identifying 100 children in grades one to five at 11 schools in District 5, where 80% of Philadelphia's Spanish-speaking (Puerto Rican) students live. "We got 94," says Cohen.

Testing some 12,000 youngsters each year, the Philadelphia schools normally use a procedure that includes teacher nominations guided by the Renzulli-Hartman Scale, achievement tests, review of the child's special accomplishments, ranking by a committee, screening by group IQ tests, and administration of an individual WISC or Binet by a certified psychologist. Because the process was obviously bypassing the gifted Hispanics, the project experimented with other measurements. Included were nominations by teachers, peers and community; the Torrance Tests of Creativity; the DeAvila Cartoon Series (a test of development based on Piaget and suggested by previous studies on Mexican-American children); and the individual WISC-R (which Cohen maintains is better for disadvantaged children because it includes both performance and verbal measures rather than just the highly verbal measures of Binet).

"The state of the art is still so green," says Cohen. "The more we worked, the more questions we raised." The project staff conducted a big advertising campaign in the community and asked for teacher nominations, but not until the psychologist actually started working did the names start coming.

The staff selected five schools to give additional orientation to parents and children, testing the theory that the Puerto Rican culture was an inhibiting factor. Puerto Rican children tend to be quiet around adults and not talk to strangers. Their culture also emphasizes they should not achieve more than others because it is bad for the group as a whole.

"We found that some of the hypotheses are just not true. Whatever may happen in Puerto Rico, not many of these children are shy with strangers in Philadelphia," Cohen says.

One of the biggest problems Cohen found was that the children do not speak a standard language. "We could use neither the English nor the Spanish version of WISC-R. They speak what I can only call 'Philadelphia Spanglish,' a blending of the two languages with a complete change of syntax. The psychologist translated as needed. Maybe it was a less valid test, but we found the children," she says.

She also found the degree of sensitivity of the psychologist made a great difference in the number of children identified at a school. "A committed psychologist gets the teachers to start looking. If you believe you'll find them, you will."

Yet another problem was the transiency rate, which Cohen says runs to about 50% among this population. "By the time we had covered all the schools, about that many had moved to other schools or back to Puerto Rico." She was able to get reliable data on 94 children.

"We haven't completely come to our conclusions yet," says Cohen, "But we found some very interesting patterns." Weighting the scores from the DeAvila test, for example, produced closer correlations between developmental and IQ scores. In 1977-78, Cohen received a second grant, this time to do similar work with non-Hispanic disadvantaged youngsters with whom she says she has found better correlations.

"Maybe we need even new indicators. Any child who scores at least two standard deviations above the mean on a developmental test such as DeAvila, for example, ought to be considered gifted. Among disadvantaged children, if you find any outstanding aspect in a child, that child should at least be considered, if not placed in a gifted program. Sometimes the only indicator may be that six other children think this child is bright," she says.

Identifying the Gifted Handicapped

Also just beginning to receive attention is the problem of identifying the gifted and talented among handicapped children. Specific techniques used in the identification process tend to be unstructured and informal. They include biographical information forms, behavioral checklists, play observation records and peer evaluation forms.

Because such children are undoubtedly held back by their handicap, the recommended approach is to look for potential rather than demonstrated achievement. A second approach, suggested by work in identifying gifted disadvantaged youngsters, is to compare the perform-

ance of a handicapped individual with that of others who have the same handicap. Emotionally disturbed children who are achieving at or slightly above grade level, for example, should be considered gifted; they probably have the *potential* for even higher achievement. Finally, one should give added weight to characteristics that enable a handicapped person to compensate most effectively for the handicap.

Traits of the Gifted and Talented Child

- Learns easily
- Is original, imaginative, creative
- Is widely informed
- Is persistent, resourceful, self-directed
- Has common sense—with uncommon understanding
- Is inquisitive, skeptical
- Is informed in unusual areas
- Is artistic to a high degree
- Has outstanding vocabulary, is verbally fluent
- May be musical, outstanding in performance
- Is an independent worker, shows unusual initiative
- Shows good judgment, is logical
- Is flexible, open
- Is versatile, has many interests
- Shows unusual insights
- Shows high level of sensitivity, empathy
- Has excellent sense of humor
- May have unusual mechanical aptitude
- Often shows leadership
- Can be the biggest nuisance
- Has parents who are most concerned about increasing educational enrichment
- Is the child the other children like best.

Developed by the Ventura, Calif., Public Schools

Signs of Creativity Among the Culturally Different

E. Paul Torrance

- Ability to express feelings
- Ability to improvise with commonplace materials
- Articulateness in role playing, creative dramatics
- Enjoyment and ability in visual arts
- Enjoyment and ability in creative movement and dramatics
- Enjoyment and ability in music
- Expressiveness in speech
- Fluency and flexibility in nonverbal media
- Enjoyment and skills in group activities, problem solving
- Responsiveness to the concrete
- Responsiveness to the kinesthetic
- Expressiveness of gestures and body language
- Humor
- Richness of imagery in informal language
- Originality of ideas in problem solving
- Problem-centeredness
- Emotional responsiveness
- Quickness of warm-up

Chapter 5.

And Then What?

Identifying the gifted and talented is only a first step. The next step is to determine how schools can meet their needs.

Opinions differ over whether to segregate or to mainstream, to have enrichment or acceleration. But these are only organizational patterns. The first consideration should be the content, and as sharply divided as is the debate over form, there is almost total agreement on substance.

Gifted children do *not* simply need more work, harder work and faster work. Too often, a classroom teacher untrained in teaching the gifted will praise a child for completing the required work and then assign either additional work or the next sequence.

In whatever the area of their gifts or talents, gifted children learn *differently*. Their learning experiences should differ in **type, quality, level of mental activity,** and **expected results.** They readily pick up the facts and the processes on which a teacher may have to spend considerable time with other children. They need opportunities to apply the facts, solve problems with them, discriminate among them, discover new things about them, make judgments about them. They need to take off in their areas of interest and produce real and useful things. They need opportunities to interact with other gifted students and access to resources beyond the classroom and beyond the school. In whatever setting the school decides to place them, gifted children do not need "busywork."

An educational program for the gifted should provide opportunity for independent learning and active participation of learners in the process. The curriculum should be only a starting point, with plenty of flexibility to allow learners to move off in whatever directions they find interesting. According to CEC, it should—

- develop abstract thinking
- sharpen reasoning abilities
- offer practice in creative problem setting and solving
- emphasize higher cognitive processes, i.e., analysis, synthesis and evaluation

- provide educational settings allowing a full range of expression for particular talents.

Gifted children, like all children, have personal and psychological needs as well. In order for them to make a real contribution with their gifts, they must first have their needs met for security, acceptance and recognition, and then be encouraged to go beyond these to self-fulfillment. They have a strong sense of perfection, and they need support and encouragement to take risks.

The Need for a Special Approach

Academically gifted students, in particular, need a curriculum based on developing critical and creative thinking and sophisticated research skills. Too much of teaching is authoritative, says Torrance, and too little allows exploring, manipulating, questioning, experimenting, risking, testing, and modifying ideas. Gifted children can develop the self-confidence to engage in these activities if they are encouraged to defer judgment when approaching a problem; to generate as many different kinds of ideas as possible at the outset, no matter how bizarre or outrageous they may seem; to combine ideas in new ways; and only then to evaluate the results critically. They should be guided to get information from primary sources, using the whole community as a base for research.

Children with aptitudes in specific academic areas need special attention in these areas, of course, but they also need sympathetic guidance in career planning. Economically and culturally isolated youngsters may have little awareness of career possibilities. Girls are often deliberately counseled away from mathematical or scientific pursuits, and even the most gifted girls are frequently guided toward lower level, stereotypical "female" careers.

Children with talents in the visual or performing arts also need special attention in the area of their talent. School systems lacking staff capable of nurturing unusually outstanding talent should look to professionals in the community who may be eager to work highly talented youngsters. But nurturing creative talent entails more than skill development. Often the personality development of the learner is tragically neglected, resulting in all-too-numerous stories of prodigies who "burn out" in their early twenties because they cannot fit their talents into a total and satisfying life. Experiences in the visual and performing arts directed toward development of the whole personality may well have dual potential—not only to nurture the budding artist but also to expand the dimensions of personality in *all* gifted and talented youngsters. The following two examples illustrate the point.

Characteristics of the Gifted	Implications for Education
Inquisitive, curious	Wants to learn by active exploration, questioning, investigation
Interested in many things and finds independent pursuit of interests rewarding	Is motivated to achieve in school if own interests are involved
Desires intensely to know and understand	Wants to try, to succeed, to master, not lazy
Perfectionist, often persevering with high concentration when motivated to reach a goal	Vulnerable to pressures of external evaluation as well as to internal standards of perfection, vulnerable to unrealistic expectations and highly sensitive to "failure," resists interruption to keep a rigid time schedule—wants to continue until the task is perfectly completed
Highly sensitive	Quick to perceive "failure" and "rejection"

Characteristics of the Gifted	Implications for Education
Nonconformist, independent thinker	Resents the constraining structure of a traditional classroom, excessive rules and regulations, and pressure for conformity at the expense of expressing individuality
Has drive to be creative, inventive, expressive, discovering	Repelled by rigid structure, rote work, textbook-centered curriculum, excessive group instruction and teacher control
Exceptional capacity for analytical and critical thinking, advanced problem solving, and perceiving relationships among ideas and events	Desires relevant curriculum, being involved in dynamic learning, sees little use in skill work, tends to be excessively critical of self and others
Self-sufficient, takes initiative, resourceful	Wants opportunities for self-direction, decision making, and developing own interests and plans
Has a distinctive learning style	Teaching methods must be based on child's learning style in order to motivate and to fulfill learning needs

Joanne Whitmore
Peabody College
for Teachers

Identifying High Potential in Culturally Diverse Students Through Theater Arts

Mary Hunter Wolf has an idea and the dynamic personality to do something about it. As president of the Center for Theatre Techniques in Education in Stratford, Conn., she has long held the conviction that theater techniques can enhance learning.

"Actors have to learn to deal with people, to interrelate, to meet deadlines. It's not just the awe or glamor of the theater, but what you have to do to produce," she says. "That element is missing from American education, where the director—or teacher—should not be a dictator but a stimulus to the performer to develop. Children in schools are trained *out* of self-initiating activities. They wait to be told what to do. They try to guess what the teacher wants. There is very little originality or inventiveness."

Wolf created a developmental series to open up talent, thinking capacities, and creativity and in 1976 received funding from the federal Office of the Gifted and Talented (OGT) for a model program. The problem she sought to address was "the tremendous loss of talent in urban settings."

New Haven's schools have an enrollment of about 20,000, 70% of which is minority. At the high school level, gifted students may enter the Independent Study Program of the Hamden-New Haven Cooperative Education Center, but many have been unable to be accepted or to succeed in the program. "I wanted to bring together junior high school youngsters who looked like good bets, give them support for three years through developmental activities and exercises, analyze their talents and capacities in the third year, and help them get into and through the high school program," says Wolf.

In the first year, 48 students were selected from the Jackie Robinson Middle School. The group was deliberately narrowed to 24 the second year and 10 the third year. The new seventh grade in the second year numbered 36, dropping to 30 for grade 8. There was no new seventh grade in the third year of the three-year grant, when almost half the funds went for disseminating the model. The New Haven schools are now picking up parts of the program and starting another to identify potentially gifted children in grades 4 to 7.

The Range of Identifications

The students were identified for creativity by the Torrance Tests of Creativity and teacher nominations; for academics by grade point aver-

age and teacher nominations; for leadership by peer and teacher nominations; and for physical competence by peer and teacher nominations and performances before an expert "jury." Says Wolf, "The whole three-year project—not just the tests— is identification. It's a process over an extended period, at a time when the children go through many changes. When we cut the group in half the second year, we may have dropped some with high talent, but the child had to be interested enough to make a commitment to self-development. Part of the program is after school, and some of the able youngsters were drawn away by sports. We can only offer the opportunity; if it doesn't awaken a commitment, we're fighting a losing battle. In most cases, it was the child's own decision to withdraw."

In the third year, of the 10 students in grade 9, three had been accepted into the Independent Study Program and were working at grade 10 levels in the arts. The other seven were considered candidates but had not yet found their particular areas of interest.

The project's activities centered on four main goals: developing a sense of community among the participants, deepening their powers of concentration, awakening each one's imagination, and helping them relate to the physical environment. Wolf describes an activity in which she divides the group in half and asks the first half to create a free-form "sculpture" with their bodies, everyone touching. The second group then enters all the vacant spaces. The first group drops out and sees what is left behind. They repeat several times. "They learn the variety of things that can be done with a volume of space. Looking at changes in form becomes interesting in itself. They are led into powers of observation without talking about powers of observation. By observing space, they become conscious of it."

Wolf says that cultural differences were less important than the children's age level. "It's not always productive at that age to explain why they are doing certain exercises. Results happen, but they don't really know why. They see that engaging in certain activities makes it possible to do their work instead of being told it's good for them.

"Gifted children need a differentiated approach. They need a focus on self-management and not just skill development. We try to draw as much as we can from real things, give them real problems to solve. Then development of fantasy has a foundation in helping them think through their own problems. The youngsters go back to their academic studies with tools to accomplish something."

In disseminating the model, Wolf has found that writing out exercises for teachers works less well than running workshops at which teachers actually do the exercises. "They must internalize them," she says. "Unless teachers really get into it, the program won't be carried

on." At least five other districts are adapting the model.

The project, says Wolf, identified gifted children who would not otherwise have been selected for the Independent Study Program. It also identified a few highly talented youngsters who may be on their way to distinguished careers. More important, though, at a very difficult, transitional age, "our children are functionally better—better able to express themselves, to identify their problems, to make choices, to grow. The trust and belief that they are talented give them tremendous incentive for seeking opportunities to express their talents. It's good for children, but especially for the gifted."

Through the Arts to the Aesthetic

CEMREL, an educational laboratory in St. Louis, developed the Aesthetic Education Program as an integrated curriculum for all children in grades K-6, although it has been used at levels as high as college. When gifted children are among the participants, they have a variety of opportunities to use their higher levels of perception.

The program's central purpose is to cultivate not artistic talent but perceptions of the world through the arts. Through its many activities, children are guided to perceive the various elements of the arts—space, light, sound, motion, pitch, color, shape—and apply these to aesthetic perceptions of the general environment—homes, schools, shopping centers, clothes, even the way a table is set. The goal is that they be able to make informed aesthetic judgments, able to say why they like something based on knowledge and understanding.

"When it comes to the gifted and talented, the emphasis has tended to be on performance skills," says Bernard Rosenblatt, associate director of the program. "We have overlooked the gift of the connoisseur, the critic. We have neglected to see that they might not be talented performers, but they might be talented perceivers."

The program was planned in 1968; curriculum development started in 1969 and was completed in 1977. It includes 44 instructional resources for developing aesthetic judgment in all aspects of the arts and through a variety of media. Rosenblatt describes it as a classroom-based program, directed by the regular classroom teacher, for whom background in the arts is advantageous but not essential. The teacher works from a detailed guide. "The curriculum in the school becomes the glue. The whole community becomes the classroom. The program opens up options for relating school and community in a substantive way."

For example, in music there is a library of tapes containing 20

different sounds, both musical and environmental. The children may select, arrange, and edit them to create a sound composition. It is a problem-solving activity in which the child is functioning as a composer, deciding how much of each sound to include, developing a theme and variations, creating a happy or sad mood, juxtaposing tempo and pitch. "When students understand the process," says Rosenblatt, "they can listen to and analyze music, discern different parts, detect different instruments, pick out themes. They become better hearers."

In the visual arts, children perceive shapes and relate them to one another and to color, line, and texture. They may arrange them to create different effects. "In doing this, the child uses flexibility, elaboration, fluency—all elements of the creative process. They learn how to perceive a work of art," says Rosenblatt.

While the program has not been demonstrated on gifted and talented children alone, Rosenblatt believes it can be a valuable resource both as a separate program and as enrichment for gifted children in the regular classroom. The differentiation comes from the levels at which gifted children will respond to the activities. Several, for example, might work together on a unit in drama to create a theatrical production. They might write reviews and criticism of artistic works. Some might be encouraged to explore the option of a career as critic. "Whatever they do with it," he says, "they will end up being a better audience for the arts and better able to make aesthetic judgments about their daily lives."

Leadership as a Talent

Although leadership is a gift with obvious value to society and it tends to exist among those gifted in other ways, it has not been nurtured in schools to the same extent as other gifts. The image of the gifted as social isolates in lone pursuit of their interests may have discouraged educators from cultivating their leadership abilities.

Many studies of the gifted have shown that such people tend from a very early age to be quite sensitive to problems of right and wrong and to want to do something about injustice. "Our problem is that we never really capitalized on these qualities in our enrichment programs," wrote Tannenbaum in 1972. "Instead, we have tried to stay as neutral and value-free as possible, much to the dismay of many thoughtful young people who don't want their school experience to be so antiseptic." In 1978 he said, "I would like to develop a companion course to all enrichment programs in which the children would expend as much effort dealing with the consequences of their innovations to humanity as they expend on learning to produce those innovations."

Law for Leaders

"I guess I'm trying to create a few more nice kids," says Marcia Lebeau. As a teacher in North Chelmsford, Mass., she saw high school students in a mostly white, middle-class community, whose parents are professionals working primarily in the computer industry but who lack opportunities to deal with social issues in their isolated suburb.

Lebeau conceived the idea for a project, applied for and received funding from OGT in 1977-78, and became project director, curriculum developer, and teacher of the course. The purpose was to provide sensitivity training for potential leaders—those youngsters who were likely to become decision-makers and determine policy affecting other human beings.

Lebeau went looking for bright—but not necessarily super-bright—students (sixth stanine and above) who could be identified as having leadership potential. She sent questionnaires to parents of 156 students enrolled in the seven law courses given at Chelmsford High School, and she says the responses were highly predictive of leadership ability. The parents were asked such questions as the student's hobbies, what he or she likes to do best alone, and the child's most endearing quality.

To obtain peer nominations, Lebeau used a form in which students in the law classes created a town and chose classmates to perform the various functions. She requested teacher recommendations and asked some to rate their students on the Renzulli-Hartman Scale for leadership, motivation, and learning characteristics. The course ultimately included 14 students.

"We discussed mainly Supreme Court cases," says Lebeau of the curriculum, which also included a history of U.S. jurisprudence, the Bill of Rights, the Civil Rights Act, and discussions of some widely publicized lower court cases involving ethical matters. Field trips, she says, were an essential component. The class went to several courts, visited a prison, and sat in on the taping of a program in the series *The Advocates*. "When they observed sentencing, they saw a lower-class person receive six months while a white-collar offender got a suspended sentence. What they consider justice and what they actually saw were two different things." In the second semester, each student pursued a course of independent study, culminating in a major paper on a court case.

Lebeau says she received 63 requests in two months to replicate the curriculum. "The program costs virtually nothing—mostly mailings, supplies, and the teacher's salary. Most high schools already have courses in law. This just adds components of moral and ethical issues and social action. It is a lot of work for the teacher, but if the teacher is willing to be challenged, it's fantastic."

Special Talents Among the Special

Programs for **gifted and talented disadvantaged children** should give special attention to their special needs. They should nurture giftedness as it is evidenced through each child's particular culture. Instruction should be less verbal and more physical and visual. It should first develop knowledge that gifted middle-class students might be assumed to possess, and then center on concrete—rather than abstract—problems that relate directly to the lives of disadvantaged youngsters. The program should deal with helping culturally different children cope with feelings of alienation and should include a strong emphasis on exploring careers that may be unknown to gifted children who happen to live in ghettos and barrios and on reservations. As with all gifted children, attention should be paid to the fact that each gifted child tends to have a unique learning style.

Gifted and talented handicapped students need programs that deal with their handicap and their gifts and talents. When it comes to the latter, teachers need to have high expectations of the students' performances, helping them to create patterns of success in their strong areas but not to be afraid of failure. Built into the program must be the recognition that it takes more time for a blind or deaf person to absorb information, but that once they have it their gifts may enable them to do unusual things with it. It may also take them more time to communicate what they have done. Physically handicapped youngsters should be included in regular programs for the gifted and talented and given physical therapy as an extra service. "As a general rule," suggests C. June Maker, "use materials developed for use with the gifted who are not handicapped, and make only those adaptations that are necessary to compensate for the *direct* effect of the handicap."

An important aspect of programs for gifted handicapped children is helping them deal with feelings about their handicap and develop positive concepts about themselves and their abilities. They should have as much opportunity as possible to be with youngsters who are not handicapped.

Who Can Teach the Gifted and Talented?

There may be as many lists of traits possessed by the teacher who is successful at teaching the gifted and talented as there are lists of traits of gifted and talented children—and they tend to be quite similar. Essentially, the traits for teachers tend to fall into two categories, skills and personality characteristics, and it is in the latter category where gifted children and their teachers resemble each other.

Self-confidence and a strong self-image are tops on everyone's list. Teachers of the gifted must not feel threatened when asked questions they cannot answer, when they work with children who may be brighter than they are. They must also be able to challenge children without being threatening to them.

Flexibility is another trait consistently noted, along with its companions, **spontaneity** and **creativity.** Teachers need to be creative in using school and community resources and in devising teaching strategies for gifted children. They must not be so tied to a curriculum that they cannot spontaneously take off in the directions of student interests. Authoritarian demands for doing things one "right" way have no place in educating gifted youngsters.

Teachers should **have a learner-centered view** of the classroom and see themselves as being among the learners. They should have great enthusiasm for the learning process and be constant learners themselves, with a wide range of academic and cultural interests. Motivating others to learn independently should be a great source of satisfaction to them.

Opinions differ as to whether teachers of the gifted ought to be gifted themselves—that is, in the top 3% of ability—or merely at least above average. But most experts agree that they **should be divergent, creative thinkers** and have a high degree of both mental and physical energy.

Teachers of the gifted **should be highly sensitive** to the needs of gifted children, possessing an empathetic understanding of and genuine concern for each child as an individual. They should **have a strong preference for teaching the gifted**—or the gifted disadvantaged or the gifted handicapped, as the case may be—and not simply be "rotated in" to teach such classes. And they should also **have a keen sense of humor.** It is hardly surprising that the personality characteristics of teachers of the gifted tend to match the composite personality of everyone's "best teacher."

Then, the Skills

Personality traits are "givens," while skills may be acquired. The best teachers of the gifted tend to be **mature, experienced** teachers with a systematic and businesslike way of conducting their classrooms, tempered by the flexibility to let learners lead. They are **experts in the subjects they teach,** know a variety of techniques to teach and to motivate, and are facilitators rather than directors of learning. They are **comfortable with the creative processes** of open-ended inquiry. They are **knowledgeable of the needs and characteristics** of gifted children, skilled in using tests and data, experienced in group dynamics.

Teachers of the gifted have to be **ready to deal with youngsters who may have negative feelings** about themselves because of reactions they have perceived in others. Regular teachers may have shown hostility—and may continue to do so toward their "best" pupils when they leave class for special programs. Gifted children need teachers who are not aloof, who do not hide behind a mask of authority, who can be their friend and guide. Teachers in gifted programs also must be **ready for questions they cannot answer,** answers they never thought of, and students going off in all sorts of directions. They must be **prepared to be worn out,** physically and mentally, both by classroom activity and by the preparation necessary to teach gifted and talented children. But they will also be inspired to new heights of creativity in their teaching.

There is universal agreement that teachers of the gifted and talented **need special training.** Regular classroom teachers and school administrators also should know the needs of gifted children and how to meet them. Among OGT's priorities is an effort to increase the number of states requiring special certification for teaching the gifted because such a requirement tends to increase both course offerings on the gifted at universities and workshops for interested educators around the state. OE has estimated that between 40,000 and 80,000 teachers are needed to serve gifted children at a ratio of 25 to 1. These teachers cannot be effective unless they are familiar with the literature and research on gifted children, know the techniques for nurturing gifts and talents, and have genuinely positive feelings about gifted and talented children as individuals.

Chapter 6.

Designing A Program

The great debate: what kind of program is best for the gifted and talented? There is no right answer. A great deal depends on the characteristics of the children, the nature of their giftedness and the needs and resources of the community. Yet the debate goes on as if answers could be based solely on persuasive arguments about educational philosophies.

Should gifted children be segregated or integrated? Some agree with child psychologist Bruno Bettleheim: Put them in regular classes. They need no special attention. If they are really gifted, they will shine anywhere. Most advocates of the "total integration" theory concede that gifted children do need some enrichment, but they worry about elitism. Lawrence Senesh of the U. of Colorado says, "Gifted children have to feel they are members of a total society." Segregating them, he continues, produces "a cut-flower civilization with gifted children suddenly placed in an ideal dehydrated atmosphere. They become an elite group."

Those at the other end of the spectrum believe gifted children cannot get an education that will nurture their gifts, suit their learning style, and be sufficiently stimulating unless they are totally segregated. They feel teachers of regular classes, untrained in education for the gifted, pay lip-service to enrichment by merely assigning the gifted child more homework.

Hunter College (N.Y.) Elementary School and the competitive-entrance special high schools in New York City subscribe to this theory. Masterman School in Philadelphia had a special program for the gifted in grades five to nine for 17 years before expanding through high school in 1976. It enrolls 1,000 youngsters from the Philadelphia public schools who have top scores on achievement tests. Governors' schools and special summer programs for the gifted and talented in many states are other examples of segregated, special programming.

The Roeper School in Bloomfield Hills, Mich., is a private school

for gifted and talented students ages 3 to 18. Begun in 1941, it uses an informal, open-classroom approach to nurture each child's gifts and talents while recognizing that most children are not super performers in all areas. "There are people who are concerned that we live on an island, that we live in utopia and not in the real world," says the director, Annemarie Roeper. "Yet it is just the opposite. We believe in individual education because, in reality, every person is different; people cannot be put into common molds." The Avery Coonley School in suburban Chicago, also a private school, uses a traditional approach. Its 250 gifted children learn in graded classrooms with a disciplined atmosphere.

Most specialists in gifted education fall between the extremes. Worried about charges of elitism, they hope an assurance that gifted children will not be totally separated from their peers will remove that opposition. Other, perhaps better reasons for selecting a middle ground include the needs of the children, the total educational philosophy of the school system, and the nature of the community. Outside large metropolitan centers, for example, there are not likely to be enough children to make up whole schools or even entire classes of gifted children. Moreover, the current trend in education is decidedly toward integration and mainstreaming. A school district might not subscribe to total segregation of its gifted children for the same reason it does not segregate by race, sex, nationality or religion—because integration has educational advantages of its own.

In fact, the philosophy of mainstreaming the handicapped is beginning to provide a yardstick for placing the gifted—that is mainstream or isolate where appropriate to meet the needs of the child. The mildly gifted, with IQs around 130 and achievement one or two grades above average, may do well in regular classroom with opportunities for individual projects and other strategies to enrich the content of their curriculum. Moderately gifted children, with IQs between 130 and 140 and performance two or three years above grade level, may need to accelerate in at least some subjects and receive special services outside the regular classroom. The highly gifted, with IQs above 140 and performance four or more grade levels ahead, may need segregated schools or classes, acceleration and advanced placement in subjects and opportunities for independent study.

A teacher who finds a budding Mozart in the class should realize the general music appreciation course is inadequate and should perhaps look for a professional in the community to develop the child's talents. Similarly, children testing "off the scale" of academic ability in some or all areas are likely to find the regular classroom drill on multiplication tables stultifying. Overall, individual needs are probably the best reason for determining placement and program for any child, not just the gifted.

Options for Program Structure

Gifted and talented children may spend all their time in regular classes, or may have partial separation—leaving the regular class for a "pull-out" program, independent study, advanced placement or honors classes. Or they may be totally separated in a special class within a school or in a completely separate facility. Within these arrangements, such strategies as grouping, horizontal enrichment, vertical acceleration and guidance may be applied.

Grouping developed a bad reputation when it was equated with rigid tracking systems that, in effect, created segregation within schools. Actually, grouping refers to a variety of ways of getting gifted and talented children together for learning. It could be anything from a totally separate school or class to an informal arrangement within a regular class. It could be a special program during the school day, such as a resource center, or an after-school or Saturday program such as the Talcott Mountain Science Center in Connecticut. It could also be seminars, mini-courses or special field trips.

Litchfield, Minn. schools borrowed the concept of cluster grouping from the Lighthouse Design Project in Racine, Wis. In one Litchfield school, eight especially bright first-graders are clustered, making up nearly 40% of a single class. The whole class works on the same materials, but the emphasis on creative processes—flexibility, fluency, elaboration, taking off from each other's ideas—provides stimulation and a chance to go as far as one's mental abilities will allow. School officials like the low-key approach that does not single out or label the gifted children, who are identified through IQ and achievement test scores. Says the teacher, "The gifted students don't even realize that they are special, mainly because they are eight gifted students in one class. If they were spread out among our six first-grade classes, one or two to a room, they might stand out. Here they have intellectual peers of their own, which is extremely important."

The Ritenour School District in Overland, Mo., started Project Challenge in 1977 for gifted students in kindergarten through grade six. Each building has a specialist in math and science and another in language arts. These teachers arrange projects within the regular classroom for gifted children in kindergarten through grade two, while gifted children in grades three to six spend two hours a day with each special teacher on activities ranging from continuous progress in math, science experiments in cooperation with the St. Louis County Dept. of Conservation, poetry writing, and broadcasting a daily news program over the school's intercom system.

Two urban school systems have used grouping of gifted and tal-

ented students as one way to deal with declining enrollment and desegregation. Montclair, N.J., found that two magnet elementary schools for the gifted and talented have kept gifted children of affluent parents in the public schools. The parents readily agreed to have their children bused across town to the magnets.

Dallas, Texas, has a comprehensive talented and gifted (TAG) curriculum for kindergarten through grade 12. It includes such special schools as the Polk Center for the Academically Talented and Gifted (a full-time program for grades four to six) and the Arts Magnet High School. There are ungraded, multi-age resource classrooms which students in kindergarten through grade three attend for up to an hour-and-a-half four days a week. In grades four to six, gifted students may attend resource rooms two or five half days a week. There are numerous options in grades seven to 12, including team-taught classes based on a thematic approach cutting across several subjects, special schools and centers, honors and advanced placement and an Executive Assistant Program at all high schools. Dallas pays special attention to identifying and serving gifted minority students. Project PEP (Pushing Excellence in Pupils), located in seven centers for grades four to six in East Oak Cliff, which is 98% black, is an integrated curriculum using creative teaching and experience-based learning to develop critical thinking among the gifted children of the area.

There are probably an infinite number of ways to group the gifted. The major advantage is they get together for social and intellectual feedback from one another. The major point to remember is that grouping is merely an administrative arrangement and what goes on once the students are grouped must be genuine enrichment.

Horizontal enrichment implies expanding sideways. The gifted children do not move up any faster, but their learning is enriched by different curriculum materials, individual instruction, emphasis on the higher mental processes of divergent thinking and creativity, independent study, problem-solving projects with real products and any number of techniques that give gifted youngsters a welcome change from the routine of the regular classroom.

The techniques may be carried out at a resource room or center which youngsters from several classes or schools attend. Conversely, special teachers may travel to the students; itinerant teachers are used frequently in rural areas. Enrichment may also be provided within the regular classroom or at one or more community sites.

Independent study is particularly suited to many gifted and talented children because of the so-called "reverse ratio" of teaching and learning—they learn a great deal with comparatively little teaching. Sometimes the technique includes a written contract between student

and teacher for completing a specified project during an established time period. Use of the community is particularly effective in career exploration and is also considered indispensable by teachers of gifted and talented students in urban areas.

AGATE (Ankeny Gifted and Talented Education) in Ankeny, Iowa, was chosen as the name of a partial pull-out program for kindergarten through grade seven, not only for the acronym but also because the word means an unpolished stone. "That is how I look at my kids," says Cleone Schneck, program facilitator. "They have so much to offer, if only someone would take the time to polish them a little bit." Six schools send 32 gifted students to a resource room where they are free to explore their own areas of interest and learn at their own pace. While AGATE depends solely on local funds, SPRINT, in West Des Moines, started in 1976 with a three-year federal grant. Serving 350 pupils in kindergarten through grade six, its resource center has a wide variety of activities for gifted students.

New Jersey's Glassboro State College came up with another type of pull-out grouping. In May 1978, it held the first "Olympics of the Mind" at which teams of secondary school students from the entire state came to compete in problem-solving and to be recognized for their talents in critical thinking. The teams worked on spontaneous problems posed at the competition and also presented their solutions to two problems given them a month before the event. A mechanical problem involved moving a golf ball from a tee into a hole, without using golf clubs or similar devices, without coming closer to the ball than six inches, and without spending more than $3 for materials. An auditory problem required a blindfolded student to walk a curving 50-foot path and with a dart gun pop 10 balloons placed at different heights. Because the student could receive no verbal commands, the team had to devise a communication system to tell the student where and when to turn, stop, aim and shoot.

Other school districts prefer to group the gifted for horizontal enrichment within their own schools or districts, thus avoiding problems of transportation and scheduling. The Berks County Intermediate Unit in Reading, Pa., provides special services to gifted students in 12 districts at classrooms throughout the county. Sixth-graders wrote, acted in and produced a play. A fifth-grade class established a bank in which they played roles to learn the intricacies of finance. A science class dissected a bull's eye under the guidance of an opthalmologist. One 13-year-old taught himself to play the piano and composed a musical theme for a motion picture.

Vertical acceleration allows students to advance upward at a rapid pace in one, some or all areas of schooling. It includes early admission to

school, skipping grades, consolidating grades, credit by examination, advanced placement courses, early admission to college and such extracurricular offerings as theater productions, band or orchestra, athletic teams and special-interest clubs.

Research evidence runs counter to charges that acceleration is harmful to the social and emotional development of gifted children. The preponderance of studies shows that not only do accelerated youngsters have healthy social and emotional development, but gifted children who are not accelerated may also be socially less mature and emotionally more frustrated because of being kept in lock-step grades. Some experts say acceleration is more effective in the early grades, and some caution against accelerating more than two years between kindergarten and grade 12. Many advocate making the decision on an individual basis: Is this child socially and physically mature? Can this child handle it? But all emphasize that early admission, grade skipping and advanced-placement courses do not constitute a "program" for the gifted and talented. They speed up the process but in themselves do not account for the differences in style with which gifted and talented children learn.

It appears that not a single substantial study has ever shown acceleration to be harmful to the typical accelerant who is intellectually able enough to warrant the use of such procedures. On the average the results are decidedly beneficial, whereas the withholding of acceleration from able, well-motivated youths is likely to harm their academic, social and emotional development. Most of the evidence against acceleration is of the "I knew a student . . ." variety.

Julian C. Stanley
Study of Mathematically Precocious Youth
Johns Hopkins U., 1977

Sequentially organized subjects, such as math and science, lend themselves to vertical acceleration, while such subjects as history and literature may be more suited to horizontal enrichment. The most famous advocate of acceleration, especially in math, is Julian C. Stanley, who—with his associates at Johns Hopkins U. in Baltimore, Md.—started conducting the Study of Mathematically Precocious Youth (SMPY) in 1972. Using the mathematics Scholastic Aptitude Test, he identified seventh- and eighth-graders with outstanding ability in the subject. Some were given the option of early entrance to college, gaining admission three and four years early. Others took SMPY math

courses, enabling them to skip the regular math progression in their schools and complete at least calculus by their senior year of high school. Many went through Calculus III and differential equations at the college level before reaching age 18.

Stanley says what passes for enrichment often is either busywork or special projects or activities that bear little relation to the specific talents of an individual student. One student identified by SMPY had been asked by his algebra teacher to do all the problems in the book instead of just the alternate problems assigned the rest of the class. But he knew elementary algebra well enough to need fewer exercises, not more drill. Through SMPY, he took his remaining math courses at the college level, entered Johns Hopkins U. two months after his 15th birthday with a third of his sophomore year completed, and made almost straight As in electrical engineering. The SMPY found mathematically precocious youngsters learn math better in a short time when placed with their intellectual peers rather than in regular classes.

CEMREL, the educational laboratory in St. Louis, Mo., has developed the Elements of Mathematics Program, a series of textbooks for highly motivated, gifted students. It covers most of an undergraduate major in math (about 30 credits) in addition to topics normally dealt with in secondary school. In the fall of 1978, CEMREL's Comprehensive School Mathematics Program (CSMP) selected 48 sixth- and seventh-graders in the metropolitan St. Louis area to take their math classes at CEMREL twice a week for two hours. CSMP Dir. Burt Kaufman believes this program can meet the needs of youngsters who are mathematically brilliant but not ready for college at ages 11, 12 or 13. Instead of waiting to take advanced placement tests in their senior year of high school, they can receive college credit as soon as it is earned.

The St. Paul (Minn.) Public Schools decided to start accelerating gifted children in first and second grades. In 1978, they began a program called Nova, patterned after the Astor Program in New York City. About 40 gifted children from throughout the city participate at Chelsea Heights Elementary School, accelerating in reading and math and mixing with regular students for their other classes.

Guidance is yet another technique for meeting the needs of gifted and talented students. It may take the form of individual counseling about careers or adjustment problems. It may be group meetings of gifted and talented young persons, led by a counselor skilled in working with such students. Mentorships, internships and other activities with community sponsors are also forms of guidance programs. The thrust is either to bring gifted and talented youngsters together to discuss mutual problems and interests or to provide an experienced adviser to help a gifted young person in some area. Sometimes it is a little of both.

Schools in Lebanon, Pa., use this approach. Secondary school students identified as gifted by IQ scores list their interests and then meet privately with an adviser. They plan projects to develop their exceptional abilities and transfer their classroom learning to real situations in such areas as computer programming, television technology, advertising, etymology and film-making. Many who had been doing only average work in classes in an effort to hide their abilities from fellow students found real excitement and stimulation in individual projects.

"All programs don't have to be alike, because all gifted children are not alike," says Edith Munro, Iowa state consultant for the gifted. And the available resources differ from community to community.

Oxford is a rural community of 14,000 in Worcester County, Mass. Project Talent, its program for the academically gifted, operates on a budget that covers only the director's salary. About 70 gifted children from elementary and middle schools attend a center one morning and one afternoon a week for activities of their own choosing. One group of middle-school children formed a dummy corporation, working with local lawyers, a bank and the town surveyor to create a development plan for federally owned land in the town. The fifth-graders worked with a student from Worcester Polytechnic Institute to build a sound synthesizer. Youngsters from two classes created an "archeological dig" in the huge pits of the local sand and gravel company.

School District 7, in New York City's South Bronx, is about 68% Hispanic, 31% black and 1% "other"—white and Oriental. About 400 of its 16,800 students are in special progress classes for the gifted, selected if they are at least a year and six months above grade in reading and at grade level in math. A major hurdle is just convincing parents their children should attend school every day, but their curriculum—which includes book discussions, drama, journalism, photography, science, advanced math and instrumental music—produces well-above-average attendance. One principal says of the South Bronx, "There may be crime and abandoned buildings here, but we have more talent and more resources than we sometimes realize."

Necessary in a Program

- Differentiated curriculum
- Individualization
- Staff commitment
- Clear administrative responsibilities
- Flexible administration
- Teacher training

- Parental involvement
- Continuity (articulation)
- Identification procedures
- Evaluation plan

While the ways to design a program for the gifted and talented are virtually endless, certain elements should be part of any design.

The first three might be considered the *sine qua non* of a program for the gifted and talented. The **curriculum must be different,** not just more of what goes on in the regular classroom. It must be individualized to the needs, learning style, interests and capabilities of each child, whether by **a formal individualized education plan** or by some other method. And the **staff must be committed to it**—both to the idea that gifted children need special services and to the program itself. Whether it operates in one or several schools, building principals involved must like, want and support the program, or it will never be successful. Once the principals are committed, the teachers must feel "ownership"—not through curriculum guides thrust into their hands, but by being familiar with the entire program.

Administrative responsibilities of the program must be clearly delineated. The program needs leadership—someone responsible for coordinating personnel and resources and for planning the program. At the outset, it needs definitive answers to certain questions. Who will be involved in designing and developing the program and the curriculum? Who will establish identification criteria and methods? Who will explain the program to the community and to the parents of participants? Who will find community resources—people and places—for enriching the program? The more clearly administrative responsibilities are established, the less likely a crucial element will remain undone.

Actual scheduling and administration of the program should be flexible. Gifted children need only small amounts of time for some things but large blocks of it for others. They should not feel constantly pressured by bells and buses when they become engrossed in a project. Nor should they have to spend a semester or a year on something they can complete in a shorter time. Space needs to be flexible as well, to make room for the projects of gifted students.

Relatively few teachers today have been trained in teaching the gifted and talented. **Teachers should be selected for their desire to work with the gifted and for their potential for success.** Then they need training—before and during their work in a gifted program. The program coordinator and the school district may be able to provide some inservice training, but the resources of colleges and universities, the

state department of education and associations for the gifted should also be investigated. Teacher training should be one of the last elements to feel the budgetary axe, because it will be one of the first to affect the success of the program.

Designing and operating a program for gifted and talented children without the involvement of their parents is a no-win situation. **Parents need to know what the program aims to do for their children and how they can help.** Some will be eager; others will be skeptical. But all need to understand what their children are doing in school and how to best support their child's development.

Around grades four to six, the differences between gifted and average children begin to be apparent. How many gifted children are already bored with school by the time they reach grade four? How many get real stimulation during grades four to six, only to enter a junior high school with no special provisions for them? **Programs for the gifted and talented ideally begin in kindergarten and continue through grade 12.** Whenever they begin, consideration must be given to where the children come from and where they are going. If the program is only part of the child's curriculum, it must relate to the total educational program. On-again, off-again experiences may be more harmful to some gifted children than nothing at all. Articulation must involve staff from previous and subsequent levels in order to ensure continuity.

Every gifted program must also establish a system for identifying participants. The methods used will depend on the type or types of giftedness the program will serve, the nature of the population from which the participants will be selected and the resources available to the school district. Identifying mathematical ability is different from identifying musical talent, and both are different from identifying literary creativity. Finding giftedness in disadvantaged or culturally different children requires different measures from those used for middle-class children. Identifying ability in the preschooler takes one set of assessments; identifying ability in a high school student takes another. Some school districts can draw on the skills of professionals from the state, an educational service agency or a university; others are left to their own devices. No matter what system is devised, it should employ multiple criteria and several kinds of measurement. Screening for moving into and out of the program should be done at least annually.

Finally, every program for the gifted and talented needs an evaluation plan. How well is it doing? Is it meeting its objectives? What effect is it having on participants, on the school and the community? Which elements are ineffective, and how could they be improved?

Minimal Conditions for Meeting the Basic Needs of the Gifted

PSYCHOLOGICAL

General sense of success in a challenging intellectual environment

Minimal pressures—e.g., time, grades, social

Flexibility in schedule and experiences—
minimal structure
alternatives
freedom to choose, decide

Opportunity to develop capacity for self-direction

Realistic teacher expectations and assistance establishing realistic self-expectations

SOCIAL

General sense of acceptance and belonging in the classroom plus at least five gifted peers with whom there can be frequent social and academic interaction

Climate of genuine respect, empathy, and affirmation of the worth of individuals; communication that learning is valued and intelligence is respected

Honest, constructive feedback from teacher and peers which sensitively helps the child understand social expectations and the effects of his behavior

INTELLECTUAL

Individualized instruction in the basic skills; curriculum and instruction adapted to child's learning style—allowing self-pacing and acceleration, and using a wide variety of methods and materials

Encouragement to be creative and self-expressive through the arts

Curriculum that is intellectually challenging, relevant to the world the child is exploring, useful and meaningful to the child, related to his questions or interests

Exposure to large bodies of knowledge in the arts and sciences and to models of gifted persons in those fields

Guidance in learning to cope with traits of perfectionism and supersensitivity—tendencies to feel inadequate and to perceive social rejection or alienation

Competition and cooperation appropriately balanced among classmates

Teacher as a model of a creative, intelligent, sensitive person who is socially skillful and actively involved in continuous learning and self-development

Student-centered classroom in which students actively participate in planning and evaluating

Intentional development of social skills and leadership potential:

- partner and team work
- class or group planning and evaluating
- class discussions which increase social awareness and interpersonal skills

Open communication in which a student can discuss ideas, raise questions or defend a position without ridicule by peers or teacher intervention because of irritation or resentment

Minimal rote memorization and practice exercises; maximum opportunities for problem solving and development of research skills—not a textbook-centered approach

Integrated, interdisciplinary curriculum

Opportunity to pursue and share interests and special abilities

Opportunity to use what is learned as tools in rewarding communication, discovery, or problem solving

Frequent opportunity for "idea play," debate and interaction with the ideas of others

A Multitude of Designs . . . and What About Computers?

Virginia is a large state with many different kinds of communities—urban and rural, wealthy and poor, homogeneous and melting pot, sophisticated and folksy. So it is no surprise that Virginia's mandate for educating the gifted and talented has produced a wide variety of programs and approaches.

South Boston, a small town near the North Carolina border, provides a resource center for gifted children in grades three to seven. Each spring it holds a project fair for display and performance of the year's projects which are judged by doctoral students from the U. of Virginia.

Chesapeake, a mixture of rural and urban interests in the Tidewater area, clusters 5 to 10 gifted students in regular classrooms in grades four to six and also gives them some instruction on a pull-out basis. Fairfax County, a large and wealthy suburb of Washington, D.C., has bused gifted elementary students to seven special schools for many years. In 1976 it bowed to parental pressure and started some centers at regular schools. Arlington, its neighboring county, abandoned separate schools altogether in the early 1970s and now has special programs in regular schools only.

Hampton, a port city with a school enrollment of 29,000, has a unique program which uses computers. The district has computerized learning programs in such areas as reading, languages, math, science, business and career awareness. Terminals at each school are tied by telephone to "the big machine downtown," enabling students in the K-to-12 gifted program to call up any program at any level and progress through it at their own speed. Nedra Harkavy, director of the program, says of 1,150 gifted children in the district, about 600 use the computer.

Around 1971, Hampton decided that learning to use computers would be a valuable skill for gifted students. The district tied into a computer at the College of William and Mary, but the 35-mile distance meant expensive long-distance calls, and the district could not set its own priorities for the rented time. With a Title IV-C grant of $350,000 for three years, the district rented a large computer for administrative purposes and for the gifted program. Although the grant money has long since run out, the district will own the computer by 1980 and defray costs by renting time to other systems.

Harkavy says the district is beginning to use the computer for remedial work. "It's a fantastic tool for both ends of the spectrum. It gives the child immediate reinforcement. Gifted children are often called ivory-tower kids—they like to work alone, and they love to work with the computer. The younger they start, the easier it is—almost like

learning another language."

For a creative writing program on haiku, the computer presents the learner with nouns and adjectives with which to create a poem. A science course programmed with local data enables students to determine effects of pollution on the James River. A program on the stock market which simulates financial operations encourages the student to use deductive reasoning to solve problems. The programs are updated yearly, some even monthly. "It's less expensive than textbooks for each child," says Harkavy. "Gifted children are not happy learning from obsolete texts. An additional turn-on is that it's so current."

Gifted high school students learn programming and then design programs for elementary pupils. By second or third grades, the children have learned computer literacy; by fifth or sixth grade they are doing their own programming on a simple level. Students type into the computer, which responds by voice, printout and a video tube. "It speaks their language," says Harkavy. "It tells them 'Right on!' 'Groovy!' 'You've done it!' When the kids use four-letter words, it tells them 'No, no.' It talks directly to the child by name." The computer also helps gifted students explore careers by responding to their interests with descriptions of vocations, kinds of work involved and training necessary to enter the field. Jobs available locally are listed on the computer.

Harkavy says knowledge about computers has been the entrance to jobs for many students, including summer work during college. "With everything so computerized now, it has helped them in their studies of law, medicine, business. They have never been sorry they learned it." Students who outgrow the district's computer use the more sophisticated equipment of the nearby National Aeronautics and Space Administration. "These kids come back and train our teachers," says Harkavy. "We can't afford specialists like that. We have programmers, but not at that level. Colleges, industries and parents can help, too."

The district has no documentation of increased academic achievement from using the computer. "These children were achieving at the 98th and 99th percentile to begin with," says Harkavy. "They have learned another skill. They love it. Their attendance on computer days—well, they even come in sick. This is the age of technology. The future is here. The computer is a 'must' tool—especially for the gifted and talented."

Steps in Developing a Program

Certain steps should be taken in the early stages of developing any program for the gifted and talented. Sometimes it is necessary to identify the children before deciding upon objectives in order to find out what kinds of gifts and talents exist in the school population. Budgetary

constraints may require locating financial resources first or determining a dollar limit and designing a program to stay within it. No matter what order they are taken in, the following steps should be included in planning a program.

Identify objectives and differentiated learning experiences to meet them. What is the goal of this program, and how can it be reached? These questions may best be answered by an advisory committee of educators and parents. They may involve defining giftedness and selecting a program to serve these kinds of gifts and talents, as well as narrowing the age range for the pilot effort. General objectives may come from the school's or school district's educational philosophy, while more specific ones may come from the general nature of giftedness and the individual needs of the children. Will the program develop academic skills and critical thinking? Will it stimulate creative abilities, artistic talent, leadership? Will it broaden horizons, deal with handicaps and help disadvantaged children? If the children are from different cultures, what kinds of differentiated strategies are needed?

Renzulli's Enrichment Triad serves as a model for many gifted programs. The Milford (Ohio) Junior High School, for example, began a program in futurology in 1974 for its academically gifted students. Designed to help students plan for, cope with and affect their own and society's future, the program cuts across all disciplines. The first level of activities in the Triad is exploratory, and Milford's gifted students explore their community and listen to speakers from government, planning firms and investigative agencies. For the second level—processes—students develop their problem-solving and critical-thinking abilities and focus on attitudes about the future. The third level—products—has led the students to design a mass transit system for the community, to create a three-dimensional map to aid in studying community planning, and to serve as representatives on the county planning commission.

Another model used as a basis for differentiated learning experiences is Bloom's Taxonomy of Educational Objectives which charts six levels of thinking: knowledge, comprehension, application, analysis, synthesis and evaluation. In North Kansas City, Mo., gifted children in grades one to nine attend a resource center one day a week, where the six levels of Bloom's Taxonomy have been "operationalized" into a series of verbs. "Knowledge" means read, write, identify, depict; "application" includes develop, conduct, debate, simulate; "analysis" lists compare, categorize, distinguish; and so on. Students choose from an extensive list of products—composition, collection, science fair project, photograph, sculpture—and select verbs from each level of thinking in order to form objectives for their independent study. "Thus," writes

program director Gail Hurst, "the Taxonomy provides a systematic, structured approach to developing activities. It also assures that activities are developed which correspond to and lead students through higher levels of thinking."

A Preschool Model for Rural Gifted

The Panhandle Child Development Assn. is an idependent, nonprofit agency in Coeur d'Alene, Idaho, with a long interest in serving handicapped children from birth. In 1976, the association received a grant from the Office of Gifted and Talented (OGT) to establish a model for preschool education of gifted and talented children. The project serves 36 children ages three to five in two locations—18 in Post Falls and 18 in Coeur d'Alene. About seven or eight each year are handicapped. "We don't look for the handicap," says Gail Hanninen, project director. "They are gifted children with unique needs. We look at the needs of the total child and design a curriculum to meet them." The handicaps have included cerebral palsy, deafness, visual impairment and "behaviorally disordered"—so identified, says Hanninen, when behavior cannot be controlled by challenging the child intellectually. "If the child has a handicap, we simply incorporate it into his or her program."

With little money, the project sought identification procedures that are low in cost but effective at the preschool level. "Most standardized instruments are stretched to their limits with 3-year-olds," says Hanninen. She uses the Peabody Vocabulary Test, which she feels is more accurate at age five than at age three; the Goodenough-Harris Draw-a-Person Test ("good for culturally different children, but coordination is a problem for three-year-olds"); and the Columbia Mental Maturity Scale, added the second year. Children scoring 1½ standard deviations above the mean qualify. Parents also complete an inventory of their child's behavior; if the inventory but not the test scores indicates giftedness, the child is given a trial placement for two weeks. "The first year, seven children were placed on trial and six were ultimately admitted. We have had maybe two who qualified on the instruments but couldn't stay in the program," according to Hanninen.

The program broadens the definition of traditional areas of preschool learning. Art and music, as well as language arts, are part of communication skills. Feelings and communication are stressed in developing self-awareness, and the usual preschool emphasis on social awareness is also present. The focus is on two areas unique to preschool curricula. Problem-solving includes strategy games, such as chess and Monopoly, and situational activities. Curiosity pursuits allow the children to identify their own areas of interest and engage in the first level of

the Renzulli Triad—exploration. There are also learning packets developed around Bloom's Taxonomy. Hanninen says the program places the least emphasis on academic areas—reading and math. "The biggest criticism of a preschool program for the gifted is: what will the child do in public school? We do many things in this program that do not conflict with the public schools—reasoning, logic, creative thinking. We don't discourage reading, though, if the child attempts to do it."

For example, activities include a scientific experiment in which a nail and a cork are placed in a bowl of water. The children use inductive reasoning to determine why one floats and the other doesn't. At the time of an eclipse, they constructed a model solar system. They used an analytical approach to explore color, and some made stained-glass windows after a walking tour of churches in Coeur d'Alene. A university student made a special learning packet for one child who was interested in rocks.

Parental involvement is especially crucial in rural areas, says Hanninen. Parents of some of the brightest youngsters do not realize the high levels at which their children perform, partly because their isolation gives them few points of comparison. Parents transport the children to and from classes, have formal and informal meetings with teachers, participate in class activities and attend educational sessions on their concerns about their gifted children. "Parents have close identification with preschoolers," Hanninen says. "When they are involved in the program, they become strong advocates. There is greater separation from junior high on when youngsters respond more to peer pressure."

She has also found that the program cannot function separately from the public schools. When a child is ready to enter school, she arranges a conference with the parents, the Panhandle teacher the public school classroom teacher and the principal, submitting a copy of the child's educational plan and advocating appropriate placement. "Yes, you can identify giftedness in preschoolers. Yes, you can provide appropriate and challenging experiences that meet their total needs. The biggest problem is having early intervention with no follow up."

Along with $40,000 from OGT, the program has about $8,000 in contracts and a few hundred dollars raised by parents. "We're doing a tremendous amount for $48,000, Hanninen says.

Determine the structure or type of program. How will the gifted and talented be grouped together? Will they be clustered, partially separated or totally separated? Will they go to the teachers or will the teachers come to them? What use will be made of the outside community? Will there be independent study and small-group activities? The advisory committee may wish to observe models of various types of programs to get ideas.

In the end, though, the most effective programs are locally designed to meet local needs. From rural Fremont, Neb., two specialists travel about 350 miles a week to meet with gifted children from 34 one-room school districts in four counties. In Ogden, Utah, two schools use their media centers for gifted children in grades five and six, where activities one day a week in such areas as art, photography and puppetry eliminate boredom with regular schooling and develop the children's creative potential. In Westchester, N.Y., gifted children in grades three to six may attend a four-week program at Manhattanville College that exposes them to Russian, Spanish, French and Japanese. In the Great Neck, N.Y., Interage Program for Critical Thinking, older students act as mentors for younger pupils.

Relate to the community. Whatever structure is devised, it must be decidedly different from the usual school experience. The community needs to know about and understand the changes. It needs to see how the program fits into the entire educational structure of the school system and how the system meets the individual needs of all children.

Identify financial resources. Some programs for the gifted and talented operate on practically nothing and some have extensive budgets. In most, the major extra costs are for staff, especially the program coordinator, and for identification of the gifted. The school district's contribution should be determined first to show outside sources that there is local commitment to the program and that it will become an integral part of the district's educational services.

How much will the state provide out of its own funds? How much federal money might it pass through to the school district? What conditions must be met for formula grants, and how might a proposal for a competitive grant be developed? The state consultant for the gifted and talented is the logical one to ask for this information. What private sources might fund such a program? Look into organizations, foundations, business and industry. Explore ways of tapping various sources to fund components of the program.

Train the program staff. A continuous, year-round in-service training plan should be developed by both staff and administration. It should be geared to help teachers reach specific goals for the program and should deal with the nature of giftedness and the problems of teaching gifted children. Techniques for motivating the higher thought processes, creative and divergent thinking, independent study and original research are strategies teachers need to learn. In-service training should also deal with teachers' attitudes toward gifted children, creative ways of using resources and developing learning situations for the gifted and curriculum design.

The Bellevue, Wash., schools have a dual-purpose, four-week

summer program called Operation Exploration. Gifted children in grades one to six meet three mornings and one full day a week in multi-age classes for group work in specific subjects and for individual exploration of special interests. At the same time, 17 teachers who work with the children spend additional time in workshops, where theories of teaching the gifted are presented and curriculum ideas are generated. They earn seven credits through Central Washington U., while the gifted youngsters get a challenging summer experience.

Identify participants. What kinds of gifts or talents will this program serve? What kinds of measurements and data best identify such gifts and talents in the community population? What special personnel is needed—psychologists to administer individual tests, professionals in the arts to judge auditions and portfolios? What criteria will be used? A committee of experienced professionals should devise an identification system, locate the necessary resources and judge the candidates on the basis of multiple and flexible criteria.

Develop the curriculum. Once the objectives and the differentiated education that will meet them have been identified, the structure determined, the money allocated and the target population identified, it is time to decide what the program will be. Teachers and coordinators of successful gifted programs generally enjoy sharing. For the best ideas in curriculum development, locate other similarly structured programs serving and same age range, the same gifts and talents and/or the same kind of population. Ask the state consultant and higher education experts on the gifted. Then adapt, modify and be creative to meet local needs.

Plan for evaluation. An evaluation plan should be developed before the program begins. It should start with objectives written in measurable terms and should identify the instruments and procedures that will measure them. While higher levels of thinking and changes in attitudes are difficult to measure, they are central to a gifted program and should not be omitted from evaluation.

Evaluation should be carried out during the program's operation to indicate necessary modifications, and at the end of the experiences of each group of participants, to determine total results. Sometimes there are unexpected but highly desirable results which should be consciously incorporated into revisions of the program. Effective evaluation requires expertise. If necessary, get help from a consultant. A good evaluation plan will highlight the differences between the gifted and the regular program and will show how they contribute to improving the education of the participants. It is essential in operating a successful program for the gifted and talented.

Chapter 7.

Educating Parents and the Public

Something about the American spirit does not love a smart kid. No one is quite sure why. The athletically gifted and the artistically talented are acceptable, but not the intellectually bright. People react with hostility to the notion of the "egghead." They do not rush out in droves to push for special programs for gifted children.

If gifted children are 3% to 5% of the school-aged population, they do not have a large political base. Someone has to take up their banner. More than most others, gifted programs need concerted efforts at winning public support. More than many other special programs, gifted programs are self-defeating without parental involvement. And more than a lot of other school activities, gifted programs are immeasurably enhanced when community acceptance turns into community help.

Convincing the Public

"Too often we start something and then allow people who are not in favor of it to beat it down," says Dorothy Sisk, former director of the Office for Gifted and Talented. The time to convince the public of the merits of a program for the gifted and talented is before it begins.

The first reaction is likely to be that of all the children in a school district, the gifted need special programs the least. "*If they are so bright, they can make it on their own*" is the usual response. Yet ability in a child is only potential. No matter what the level of ability, it is translated into achievement only with guidance and experience to nurture it.

Failure to nurture gifts is a tremendous waste of resources for the good of all society. But gifted children should not just be considered resources, as they were after Sputnik. They are individuals with the right to realize their own potential for their own good. Unfortunately, regular

classrooms—even with what generally passes for "individualized instruction" or "enrichment"—are not usually very good for gifted children as a total diet. Their classmates perceive they are different and shun them. Their behavior is different, particularly if they are bored and unchallenged, provoking hostile reactions from teachers.

"My study of gifted underachievers," said Joanne Whitmore of Vanderbilt U., "revealed that these behaviors and attitudes were the products of interaction with a school environment that was not sufficiently responsive to the needs of the gifted. In every case, the 'problem behavior' was the child's way of coping with the conflict between personal needs and classroom social and academic experiences." With the creatively gifted, in particular, says Donald Treffinger of the U. of Kansas, "if they don't have constructive ways for that creativity to expand and be expressed, they will find unconstructive ways."

The result of neglecting gifted and talented children is that the great majority of them are not achieving up to their potential. It is estimated that as many as half the gifted children flee the public schools. Gifted youngsters drop out of school at a rate three to five times greater than the rest of the school population, accounting for as much as 20% to 30% of all school dropouts, according to some experts. Many of those who do not drop out leave, instead, for private schools, if their parents can afford it and see their children's needs not being met in public schools. On the other hand, the result of nurturing their needs is that they do make greater gains in achievement and manifest better personal adjustment in special programs.

"*But special programs for the gifted are elitist and undemocratic*" is the next likely response. Schools used to be geared strictly toward the majority of children who cluster around the average range of ability and who perform at about a standard "grade level" determined for their age. Those who could not or did not make it—because they were handicapped, disadvantaged, hungry, non-English speaking, bored, unchallenged, not suited to that learning style, or anything else—fell by the wayside. In the 1960s the notion arose that equality does not mean everyone is the same or has the same needs. Real inequality stems from treating unequals as equals. Equality of educational opportunity for those on the lower end of the ability scale means special programs to meet their special needs.

People more readily accept the idea of helping those on the lower end than of helping those who are "better." It is all right to help children come up to the standard, but why give help to those who can go beyond it? Yet gifted children may deviate from the mean on one end as much as do mentally retarded children on the other, and they are just as much in need of special services. The gifted are equally entitled to a public

education appropriate to their needs, and public schools may be seen as more, rather than less, democratic when they nurture diversity rather than uniformity.

Talent is Everywhere

Part of the problem may lie in the misconception that gifted children come only from white, middle-class suburban homes. Terman's description of the gifted children in his studies helped the cause of the gifted by making them appealing, but it also cast an elitist shadow on the group. For a long time, though, it was easier to find gifted children in such an environment, because those children were more likely to match everyone's idea of a gifted child.

We . . . are committed to making equal the opportunity children have to gain an education. . . . This is a simple concept, but it is not a simple-minded one. Equal opportunity does *not* mean exactly equal treatment for each and every student, regardless of background or condition. It *does* mean guaranteeing that every young person has an equal chance to get the kind of education that will help that individual realize his or her potential.

There is among too many people in this country an unfortunate confusion between the concept of democracy and the concept of uniformity. Treating every child exactly like every other may seem democratic—but it actually is as unegalitarian as anything could be, because it ratifies and enforces inequalities that already exist. Giving special support to the disadvantaged or the handicapped, or to the gifted, may seem biased or elitist—but it actually enhances the democratic quality of our schools, because it makes it possible for *all* children to achieve an education that equally meets their needs. There is no conflict between special programs for special need groups and our national goal of equity in the school process. The two propositions are compatible and complementary.

Mary F. Berry
Assistant Secretary for Education
May 17, 1978

"Talent," wrote A. Harry Passow in 1972, "is not the prerogative of any racial or ethnic group, any social class, or any residential area. It may lie untapped in some situations under some conditions, but no population has either a monopoly on or an absence of talents. Nor will depriving the gifted and talented pupil of opportunities to develop and use his gifts result in upgrading the attainment of his less able peers. Such misguided and meaningless egalitarianism contributes to the development of no one in particular." Even handicapped children may be gifted or talented, an idea entertained by very few until only recently. Handicapped children were always shunted off to special classes with the implication that they were different and inferior, and teachers worked mainly on their handicaps. Now that mainstreaming is the order of the day, handicapped children may appear less different, and their gifts and talents may be identified along with their handicaps. Certainly, educators should make it clear from the outset that participants in a gifted program will come from all classes, races and nationalities.

"*But if they are separated from their classmates, won't they become snobs?*" Quite the contrary, according to numerous studies. In fact, nothing tends to give a gifted child feelings of arrogance more than being a superior student in a class of average children. When gifted children are placed in an entire class of gifted children, they quickly realize that many others have abilities equal or superior to their own. Suddenly, and perhaps for the first time in their lives, they have to work hard to make the grade.

Studies of children who have skipped and accelerated show no harmful effects and rather good social adjustment. Studies of participants in the Cleveland Major Work Program, one of the most segregated programs, show that a majority adjust well both to the program and to society at large. In special classes, gifted children find something they desperately miss otherwise—other children with like abilities and interests who are eager and receptive friends.

A word of caution from Mary Hunter Wolf, director of the theater arts program in New Haven, Conn.: "A low profile for a special gifted program works better in the long run. When a program gets lots of pizzazz and newspaper coverage, it brings out all the charges of elitism. High visibility can be valuable, but how much to allow is an important policy decision."

A Small Investment, a Big Reward

"All right then—gifted children need and are entitled to special services as much as anyone else, and providing these services does not

create an elitist group of snobs," continue the opponents. "*But we spend so much money on special programs that there is hardly anything left for average children.*" True, schools are spending more on special education than ever before. The attention to special services is recognition that an appropriate education means meeting the needs of youngsters beyond what can be offered in a regular classroom.

Compared to many other special programs—including those which nurture the athletically gifted—special services for the gifted and talented are not very costly. Supplemental state and federal funds are available. Gifted students who accelerate may end up costing less, because they complete their schooling in fewer than 12 or 13 years.

Dorothy Sisk says, "Gifted programs can revitalize all education. Gifted and talented children love education. They can become models. Special programs allow them to stretch themselves intellectually. When they come back to the regular classroom and talk about their projects, they turn the rest of the class on." They may also gain a measure of acceptance—rather than resentment—from their peers in the regular classroom.

But in most school systems, the "average" get the lion's share of resources; handicapped and disadvantaged youngsters get large allotments; and the gifted get nothing at all. In the competition for scarce dollars, special education for the gifted has consistently been considered a luxury rather than a necessity.

The Dillon Outdoor Education Center

"If you want to convince rural people about a special program for the gifted, you have to put the cart before the horse," says Janice Killian. In directing a low-budget program for gifted high school juniors and seniors in Hutchinson, Kan., she found that talking about it only got people to listen politely. "You have to begin the program and make it work so they can see you're not going to make their kids weird."

She received a grant of $10,793 from the Office of Gifted and Talented for 1977-78 to work with students in the six school districts served by the Reno County Education Cooperative. "They don't like using federal money for a local project," says Killian, "but what we needed was seed money to get something started."

Using the state definition of giftedness—97th percentile on IQ and 95th percentile on achievement tests—she quickly selected 30 seniors and 30 juniors, each group to participate for one semester. "The identification was slipshod," admits Killian. "Identification should really begin at kindergarten or before. By senior high school, you miss most of the gifted because they have already figured out the system. The high

Oh, Those Gifted Students!

The story has become almost a classic in gifted education circles. A superintendent went to his school board with a proposal to group gifted children by ability, to segregate them for special instruction part of the day, to advance them according to ability rather than age, to bus them at public expense to other schools where they could work with other similarly gifted students, and to hire special teachers for them. After the uproar subsided, the superintendent explained that he was only describing what the schools were doing for their athletic teams.

achievers in high school won't necessarily test out as gifted on an IQ test." She selected potential participants on the basis of achievement test scores and obtained parental permission to have a psychologist from the cooperative administer an IQ test.

"I just wanted to get it going. I wanted to start a program to show the county what gifted programs are all about. Rarely do high school students have an opportunity to do original research. Gifted children think around corners. They think they are strange. They need a chance to be with other gifted children"—a chance that comes even less often in a rural setting, she says.

Killian describes the program as a Type-3 project in the Renzulli Triad—real experiments for a real audience with real results. "Don't hang projects by the gifted on a bulletin board," she says. "Have them do something meaningful."

A Park, a Prairie and a Poet

The groups used two sites—a park of about 16 square acres with a large pond in Hutchinson and a grass prairie. At Dillon Park, they sought to determine how to stock the pond to provide the best fishing for town residents. They bought seines and studied the fish population, determining the age of the fish by their scales and the contents of their stomachs. They borrowed microprojectors to study the wildlife, insects and fish of the park. They learned how such research relates to all scientific research by the hands-on experience of going through all the processes from hypothesis to conclusion. Then they brought their rec-

ommendations to a real audience—the manager of the park.

The other site, Sand Hills State Park, is a delicate piece of land, says Killian, one of the last prairies in Kansas with grasses standing six feet high. The students set out to devise a plan for its use that would preserve it from picnic tables and campsites. They needed to find out the kinds of soil and wildlife in the area and to determine whether the grasses should be mowed or burned. They used aerial photographs to select areas for testing soil and wildlife, brought samples back to Dillon for examination, and wrote reports. They talked to ecologists around Kansas and figured out how to keep the park in its natural state. Their reports went to the local fish and game department.

"It was the blind leading the blind," Killian says. "I learned a lot, too. We have been going back to take better samples because we know we weren't strict enough in our scientific design. But the authorities still haven't touched the park with bicycle trails and playgrounds."

Killian brought a poet to the park to talk to the students about the historical significance of the land. He explained that Sand Hills marks the first of this type of high grassland, which then stretches west, and told how women settlers on such land went mad from loneliness. "We tried to bring the humanities into the project, in addition to science," says Killian.

It was an inexpensive project. Killian says the money went mostly for hardware—microscopes, soil-test kits and the like—and people who knew how to direct original research in ecology. State funding provides $4,500 for each certified gifted specialist, pro-rated if the teacher works less than full-time in a gifted program. The poet charged nothing, and neither did an elderly woman who shared with the students knowledge from her hobby of birdwatching. "Rural communities have people who can be resources. What gifted programs need most is thinking—and people who will help students to think," she says.

Killian says the program could be continued without further outside funding, but the only district to continue it is Hutchinson, which comprises 52% of the cooperative. The difference, she believes, is that Hutchinson sent its own science teachers to the project to participate and be trained. She echoes Mary Hunter Wolf: "Teachers need to feel ownership in the program. If they don't own a program, they won't do it. The teachers who came out and worked on it knew it was good. But I could never get a teacher or superintendent from the outlying districts."

Filling out formal evaluations, the students said that they found the course different from their usual school experiences and that they enjoyed associating with the other participants. Almost none found any detriment in missing their regular classes. Their major criticism was the lack of time in the one-semester program. They wanted better equipment and a better explanation at the beginning as to what they were doing.

"The parents were the easiest to please," says Killian. "They were happy just to have their children doing something different." That difference, she says, is vitally important for gifted students in rural areas. "When they get to colleges away from their area, they cannot believe the competition and the levels at which others with their abilities have worked." The Dillon project also included a blind student, who now has better than a B average at George Washington U. in Washington, D.C.

Working with Parents of the Gifted

No longer are parents of gifted children remaining silent. Once they were almost embarrassed to admit to having a gifted child, afraid to sound snobbish or bragging. Besides, how objective is a parent? Don't all parents think their child is special? Many directors of gifted programs have, in fact, found parents to be reliable predictors, if not of actual giftedness, then at least of above-average ability, especially in the case of very young children.

Parents of gifted children now see what parental pressure has done in getting special education for the handicapped. Parents of handicapped children also used to be close-mouthed about problems and needs of their children that the world seemed not to understand. Getting that message across has encouraged parents of the gifted to do the same. National, state and local organizations for parents of gifted children are helping parents understand their children's needs and are pressing for programs to meet those needs. In district after district, state after state, educators concede that existing gifted programs would never have happened without the parents. They create awareness among the general public that leads to funding for a special program.

"Capitalize on parents," says John Grossi of the Council for Exceptional Children. "Organized parents are the most effective voice in the community." Once a program gets started, parents can provide help as volunteers, arranging and chaperoning field trips, putting together resource materials and finding people in the community with special talents or knowledge to offer a gifted class.

A very important part of any program for the gifted is involving the parents in their child's school activities and educating them about dealing with their gifted child at home. Gifted children can be downright baffling to their parents.

Most parents would like their gifted children to be "normal," well-rounded and well-liked. Not that they do not want their children to be gifted, but many parents have deliberately kept their children out of

programs for the gifted and talented so they would not become too "different." Caught up in the now-fading stereotypes of what they think children should be, parents often forbid girls to accelerate and pressure boys to "go outside and play baseball" when they would rather draw or write or tinker with things. Fathers, says Frances Karnes of the U. of Southern Mississippi, play an especially important role in subtly influencing the career choices of their gifted daughters. Being gifted, children quickly discern that what they want and need and aspire to may not fit their parents' expectations.

Parents of gifted children need to know first, that they are parents of a child who happens to be gifted. The gifted child is still a child. Although the parents may be gifted, too, they may well have forgotten the adjustment problems of a child who is "different." They may forget the child is not a superhero in all areas or that gifted children often do not have the maturity to match their intellectual development.

A program for the gifted should include advising parents in groups about the nature of giftedness and individually about what their child realistically can—and cannot—do. Parents need to be assured from the start that the school is going to do something worthwhile for their child. They have perceived myriad problems, such as what to do with a gifted child in a family of children who are not also gifted. How do they cope with the child's seemingly endless energy and curiosity?

The Right Nudging at Home

Parents need to be aware of their importance in the education and development of a gifted child. A school program without reinforcement in the home is a waste of time and money. Some parents need to be held back from creating structured curricula and pushing the child in specific directions, while other need to be nudged into providing a sufficiently stimulating environment for the child's out-of-school hours. Following are suggestions for parents culled from a variety of sources:

- Give a gifted child all the love, warmth and affection that any child needs.
- Don't brag about the child's gifts and talents to others, but let the child know you value them highly.
- Enjoy the uniqueness of your gifted child, and enjoy the special traits of your other children. Don't compare them to each other.

- Use everyday situations to expand the child's visions, interests and vocabulary. Talk to the child while cooking, walking, watching television, shopping, driving, taking a vacation.

- Listen. Answer the child's questions when you can, admit when you can't, and help the child find the answers. Encourage the child to communicate within the family.

- Read to the child. Provide a variety of books, magazines, toys and games. Even household discards—such as boxes, utensils and clothing—can stimulate a gifted child's creativity. Take the child to museums, libraries, theater, concerts, historical sites, fairs, airports, factories. Discover the often inexpensive resources of your own community that can feed the child's insatiable appetite for learning.

- Lead, don't push. Provide outlets for the child's expressed interests, but be prepared for those interests to change.

- Allow the child time to do nothing. Don't expect the child always to be engaged in intellectual or productive activity.

- Provide discipline. Explain the rationale for your disciplinary actions because gifted children respect logic. Help the child become organized and develop good work habits. Assign household chores appropriate to the child's ability.

- Give the child space for projects and hobbies. Avoid interrupting the child who is deeply immersed in an activity. Fix times for bed and meals, but otherwise be flexible about schedules.

- Allow the child increasing independence and responsibility to coincide with increasing maturity. Encourage the child to solve problems and make decisions, and use the child's suggestions within the home.

Of great help and support for parents is membership in an organization for parents of gifted children. Sometimes, parents need other parents of gifted children to whom they can tell without guilt that their child is, on occasion, too much to handle. School officials should know which organizations exist in their community, both to refer parents to them and to call upon them for help in programs for the gifted and talented. A useful guide is *How To Help Your Gifted Child: A Hand-*

book for Parents and Teachers by Gina Ginsberg and Charles H. Harrison, published for the Gifted Child Society by the Monarch Press of Simon and Schuster.

A Preschool Program for Exceptionally Precocious Children

How many children are there who can be described as extraordinarily bright? How many should fall at the far right of a bell curve, with abilities at, say, four grade levels above their age? "A very substantial number, more than one would think," says Halbert Robinson, director of the Model Preschool Program for Gifted Children at the U. of Washington in Seattle.

The expectation, he says, is that about three children in 100,000 would meet such standards. "We draw from a population of 30,000, and we have identified more than 20 children whose test scores are four standard deviations above the mean."

The model preschool is part of a comprehensive effort to serve exceptionally bright children. "Programs for the gifted too often are piecemeal—third grade or fifth grade only," says Robinson. "They may end up doing as much harm as good. We're trying to give these children some educational continuity to allow them to progress at their own rate." Public and private schools in Seattle have picked up on the program, allowing the children to continue to progress at their own rate through elementary and secondary school. "By the end of preschool, some of these children are achieving at the fourth-, fifth-, and seventh-grade level. It shouldn't take them 13 years to go from kindergarten through grade 12. Part of our comprehensive program involves early admission to the university—at 12 or 13, and even as young as 9," he says.

Another component is a longitudinal study of 350 children who were identified as gifted at an early age and given special services from the beginning. "We have found no adverse effects," says Robinson. "The 15 students who entered the university early are better adjusted than when they entered. We have kept them together, and they have developed real friendships and good self-images."

Children who finish the preschool are put in classes with older children throughout the area of Greater Seattle, which Robinson says also has been beneficial. "Their social and personal development is as diverse as any other group of children. They seem to be doing just fine.

"I find the position of not separating gifted children hard to understand. There are no research data showing damaging effects from

early entrance to school or college or from skipping grades. We're not segregating an elite group. We're in favor of allowing children—all children—to go at their own rate, which used to be the way school systems were organized in the days of one-room schoolhouses. Even when some children are younger than others, no one feels elite when everyone is achieving at the same rate," Robinson says.

The preschool program, which started in 1974, is designed to identify extraordinary academic capabilities in children age two to four. "We look for abilities in spatial relations, numbers. Has the child a good memory? Can the child read? We pick children who are extraordinary in some component—at twice their age level—but not necessarily across the board. Of the 350 in the longitudinal study, 53 would meet the qualifications for the preschool program and 15 were reading at the second-grade level or higher at age two," he says. The preschool serves about 36 children each year.

Identifying the Very Young

Testing is done with a broad battery, including Stanford-Binet, WISC-R and several math, spatial relations and reading tests. The tests used are mainly for the preschool level, but Robinson says sometimes tests for older children and even adults are given. Parents complete a questionnaire, and a child may qualify solely on the basis of descriptive data. "At ages two and three," says Robinson, "descriptions from parents are most accurate, not necessarily in their assessment of intelligence, but in describing behavior that we can translate into normative terms." Robinson also says that a child who reads early may not always have a high IQ. "It might range anywhere from about 117 to off the scale."

The program is individualized to the capability of each child and uses curricula and strategies developed for older children. Workbooks and other materials that assume the child can write are adapted to the child's immature motor skills but not for comprehension levels. "Educational programs are devised for the cognitive level at which the child is functioning," says Robinson, "but it is all done in a preschool context. They don't sit at desks five hours a day. There is a lot of self-directed activity."

Besides their initial involvement in completing questionnaires, parents are encouraged to visit the school, and confer with teachers informally and frequently. Parent response is an important source for program planning. There are also formal meetings for parents, and the school provides a parent reading list as well as a small circulating library

of materials on child development. Two parents sit on the project's advisory committee.

Robinson says the children maintain their academic performance after they leave the preschool. "At ages six, seven and eight, when all the other children are reading, these children still look impressive. They stay very precocious." The project has helped increase understanding of precocity in all the neighboring school districts and assisted in developing the K-12 continuous progress program in Seattle. As a model project—funded jointly by the Office of Gifted and Talented, the state, and the Ford Foundation—it disseminates its curriculum guides and research evidence widely. As an overall assessment, Robinson says, "It's fun. They are a neat group of kids to work with."

The Community as Resource

The best part about creating community awareness of, and gaining community support for, programs for the gifted and talented is that the community itself becomes a resource. Gifted and talented children usually need more than can be provided within the confines of a school. Outside the school are people and places from which gifted and talented students may learn. There are things they might never have heard of or thought about before, original sources of information, real problems to be solved, real audiences for their projects.

People may come to the school to bring new ideas to a class of gifted and talented youngsters—college professors, writers and poets, musicians and dancers, scientists and doctors, governmental officials and business people. The smallest, most isolated community has people with knowledge to share about something of interest to gifted children.

Students may leave the school for learning experiences in and near the community. Special seminars and enrichment programs might be arranged with a local college or university. Museums, libraries, theater, radio and television stations, newspapers, the town hall, an historic site, a park or zoo, a reservoir or natural forest, hospitals and medical clinics, courthouses and law offices, special interest groups (the League of Women Voters, art guilds, the Audubon Society, service clubs, an ecological society), businesses and factories—all have something to offer about how the world works.

Taking advantage of such community resources means that opportunities for enrichment are not very costly. The major expense is for someone who can find the resources and interest the community in sharing its knowledge with gifted and talented students. One of the most signfificant ways to use the community is to help gifted and talented

students with career awareness and career education. The adults most children know are their relatives, their teachers and maybe their doctors. Gifted and talented children should have wider horizons when choosing a career.

Mentors—Guides for the Gifted

Community people may supervise apprenticeships, where a young person works with several adults in a career field, or internships, where one adult guides a number of young persons. Yet another form of adult-student relationship that has lately been gaining a solid place in programs for the gifted and talented is the mentorship. A mentor is an expert in a career field or other area of interest shared with a student who serves as a guide and role model to the student on a one-to-one basis.

A mentorship program matches a secondary school student with an adult who has a special skill, interest or activity in which the learner is also interested. The National Commission on Resources for Youth (NCRY), a clearinghouse in New York City for model programs that bring young persons into the community, says mentorships can flourish in hospitals, law offices, corporations, ecology centers, arts programs, day care centers, consumer programs, crisis intervention centers and many other places. "Successful mentors," says NCRY, "take a personal interest in their sudents and are able to provide guidance without smothering initiative. Often the mentor treats the student like a junior colleague, sharing information and providing creative situations in which the student can use what he or she has learned."

Coordinators of mentorship programs need to be familiar with the resources of the community and to be able to locate potential mentors. Some districts advertise at first, but once a program gets going, people start volunteering. Many persons who have gained stature in their own positions are quite eager to help a gifted youngster along the same path. Often, however, they are also busy and cannot give constant attention to the student. Students selected for mentorships should be mature, able to work independently, and capable of sustained interest in a project for a considerable time. The coordinator must make a careful match between mentor and student.

NCRY recommends that credit be given students for their work with mentors. Scheduling can be full-time for a semester, one day a week, one period a day, half a day, after school or on weekends. Distance and transportation may be a problem, which must be resolved by the coordinator.

The variety of programs is virtually unlimited. The Creative Arts Community in Hartford, Conn., matches artistically talented students

from a large region with professionals. The Switching Yard, a project of the Volunteer Bureau of Marin County (Calif.), matches students from 14 county high schools with mentors and community groups for credited work experience. A high school in Minneapolis secures mentorships for research in nutrition and food processing at the local General Foods plant. The Joan of Arc Medical Program at New York U. Medical School provides mentorships in all areas of health for inner-city youth, while the Learning Web in Ithaca, N.Y., gives small-town youngsters an opportunity for hands-on experiences with mentors in fields ranging from carpentry to veterinary medicine to dance.

One thing coordinators should not do is bow out after the match has been made. They need to be constant advocates for the students, monitoring the placement, making sure it is satisfying to both student and adult, watching for signs of deterioration. When a match works, however, a kind of magic can develop between mentor and student. Few people who have been successful mentors end up doubting the validity of special programs for the gifted and talented.

Selected Sources of Information on Programs for the Gifted and Talented

Publications

Barbe, Walter B., and Renzulli, Joseph S., editors. *Psychology and Education of the Gifted*. Second edition. New York: Irvington, 1975.

Bloom, Benjamin, editor. *Taxonomy of Educational Objectives. Handbook I: Cognitive Domain*. New York: David McKay, 1961.

Fortna, Richard O., and Boston, Bruce O. *Testing the Gifted Child: An Interpretation in Lay Language*. Reston, Va.: Council for Exceptional Children, 1976.

G/C/T. A magazine for parents and teachers of Gifted/Creative/Talented children. G/C/T Publishing Co., Box 66654, Mobile, Ala. 36606.

Ginsberg, Gina, and Harrison, Charles H. *How To Help Your Gifted Child*. New York: Monarch Press, Simon & Schuster, 1977.

Kaplan, Sandra N. *Providing Programs for the Gifted and Talented: A Handbook*. Reston, Va.: Council for Exceptional Children, 1975.

Maker, C. June. *Providing Programs for the Gifted Handicapped*. Reston, Va.: Council for Exceptional Children, 1977.

Renzulli, Joseph S. *The Enrichment Triad Model*. Mansfield Center, Conn.: Creative Learning Press.

Renzulli, Joseph S. *A Guidebook for Evaluating Programs for the Gifted and Talented*. Ventura, Calif.: National/State Leadership Training Institute on the Gifted and Talented, 1975.

Torrance, E. Paul. *Creativity in the Classroom*. What Research Says to the Teacher. Washington, D.C.: National Education Association, 1977.

Torrance, E. Paul. *Discovery and Nurturance of Giftedness in the Culturally Different*. Reston, Va.: Council for Exceptional Children, 1977.

Tuttle, Frederick B. *Gifted and Talented Students*. What Research Says to the Teacher. Washington, D.C.: National Education Association, 1978.

Organizations

Office of Gifted and Talented
U.S. Office of Education
400 Sixth St. SW, Rm. 3835
Washington, D.C. 20202

The Association for the Gifted (*Journal for the Education of the Gifted*)
% The Council for Exceptional Children
1920 Association Drive
Reston, Va. 22091

The Foundation Center (*The Foundation Directory*)
888 Seventh Ave.
New York, N.Y. 10019

The American Association for Gifted Children
15 Gramercy Park
New York, N.Y. 10003

National Association for Creative Children and Adults
8080 Springvalley Dr.
Cincinnati, Ohio 45236

National Association for Gifted Children (*The Gifted Child Quarterly*)
217 Gregory Dr.
Hot Springs, Ark. 71901

Gifted Children Research Institute
Suite 4-W
300 W. 55th St.
New York, N.Y. 10019

National Commission on Resources for Youth
36 W. 44th St.
New York, N.Y. 10036

These are the youngsters who will march to their own drumbeats, and often there is a lot of hostility directed toward them. They ask the threatening questions in the classroom.

Harold Lyon, Jr.
Director, Office of the
Gifted and Talented,
Office of Education